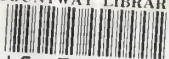


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# THE JOURNAL

OF THE

## Missouri State Medical Association

THE OFFICIAL ORGAN OF THE STATE ASSOCIATION AND COMPONENT SOCIETIES

ISSUED MONTHLY UNDER DIRECTION OF THE PUBLICATION COMMITTEE

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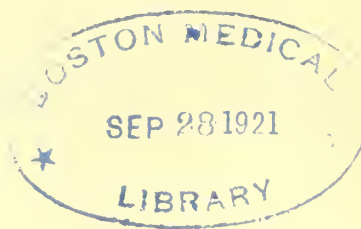
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## INDEX TO VOLUME XVII

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## Missouri State Medical Association

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CHICAGO, ILL., AND ST. LOUIS, MO., JANUARY, 1920

Number 1

E. J. GOODWIN, M.D., EDITOR  
3529 Pine St., St. Louis, Mo.

PUBLICATION COMMITTEE (W. H. BREUER, M.D., Chairman  
S. P. CHILD, M.D.  
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### ORIGINAL ARTICLES

#### INTESTINAL OBSTRUCTION

HARVEY S. MCKAY, M.D.  
ST. LOUIS

During the past four years there are in the records of the St. Louis City Hospital 185 cases of acute intestinal obstruction. These are of all causes excepting those due to external hernias. Of the 185 cases, 113 cases, or 71 per cent., died; 72 cases, or 39 per cent., recovered. During the same period 359 cases of strangulated hernia are recorded of which 285, or 79.3 per cent., recovered, and only 74 cases, or 20.7 per cent., died. Thus, it is seen that strangulated hernia gave a mortality of only 20.7 per cent. whereas acute obstruction from other causes was followed by a mortality of 71 per cent. The explanation of the lower comparative mortality of strangulated hernia is due to earlier recognition of the cause of the obstruction and consequently earlier operation. The diagnosis of obstruction due to external hernia is so obvious that delays in diagnosis and operation are not frequent. The fact that 113 cases of acute intestinal obstruction perished out of a total of 185 cases is the most convincing evidence that the cause is not recognized early.

It is absolutely imperative that intestinal obstruction be recognized early if the best results are to be obtained by surgery. If we accept the authority of Sir Frederick Treves who says, "There is no avoiding the fact that acute intestinal obstruction if unrelieved, ends in death," then it is clearly our duty to see that every case obtains operative relief. The mortality increases in proportion to the delay in operation.

About one-half the operated cases of acute mechanical obstruction of the intestine perish. Deaver reported 286 cases with a mortality of slightly less than 50 per cent. Unquestionably, delay before operation is the chief factor in this mortality; with the exception of severe hemorrhage or perforated viscera, no acute sur-

gical condition of the abdomen demands so prompt diagnosis and treatment as the obstructed gut. Ulcer of the stomach may perforate and unoperated the patient may not die. An ectopic pregnancy may rupture and the patient recover without surgical interference. An unrecognized mechanical obstruction of the intestine of more than seventy-two hours' standing, regardless of treatment, almost certainly means death.

The recognition of acute mechanical obstruction is not ordinarily difficult. The symptoms are fairly characteristic and constant. The first symptom is severe colicky, crampy pain in the abdomen, of sudden onset. The pain is severe and soon disappears, only to appear again with increased intensity. It comes and goes, with free intervals. The patient is quite prostrate, rest and sleep are out of the question. The features show the anxiety of the patient. A cold sweat breaks out, vomiting starts, reflex at first, but later continuous. It may not be violent but it is persistent and uncontrollable. The presence of fecal vomiting should never be observed and indicates that the case is practically hopeless. There may be one or two bowel movements after the onset of the obstruction, due to the emptying of the bowel below the obstruction. An enema may cause the bowel to move as long as there are fecal contents below the obstruction and some gas may escape but after this there will be no further bowel movements and no escape of flatus. There will likely be a history of previous operation, gallbladder disease, appendicitis, or some inflammatory condition of the abdomen.

In the beginning there may be little distention and little tenderness. High obstruction may never present distention and one should not wait for distention to develop before operation, as valuable time may be lost. Peristalsis may be visible, in fact, if careful observation is made it will be seen in the majority of cases. It can frequently be heard with the ear or stethoscope. Visible peristalsis when observed is a most valuable sign. The pulse may be slightly increased and fever is always absent. The absence of



fever is an important differential point in excluding adynamic ileus from mechanical obstruction. The use of cathartics is absolutely contraindicated, either for diagnostic or therapeutic reasons. The use of castor oil, croton oil, or other purgatives simply aggravates the pain, increases the vomiting and may result in great harm. The hypodermic has no place in intestinal obstruction; at least not until the diagnosis is positively established.

It is essential that mechanical obstruction be differentiated from reflex or paralytic ileus. Lynch and Draper in a recent paper state, "There is only one form of acute intestinal obstruction, namely, that caused by mechanical means, the so-called adynamic or paralytic form should be looked on in the true light; namely, that it is a protective symptom." They state that the latter requires only gastric lavage for the relief, but no patient is saved from mechanical obstruction except by operation. The above writers report a mortality of only 25 per cent. in twenty-four cases and attribute this low mortality to early operation. All cases operated by them under forty-eight hours from the time of attack lived, 90 per cent. of those operated under seventy-two hours recovered; their mortality was obtained from those cases operated after the seventy-two hour period had passed.

The determination of the cause and location of mechanical ileus prior to operation is not necessary but it is essential to establish the fact that somewhere along the intestinal tract there is some mechanical obstruction. In nonmechanical dynamic ileus, such as occurs in lead-poisoning, visible or audible peristalsis is never present and the history is significant. The adynamic varieties of nonmechanical ileus are reflex and due to many causes, such as appendicitis, renal calculi, hepatic calculi, diaphragmatic pleurisy and local or general peritonitis. Fever is always present and excludes mechanical block because in the first forty-eight hours of mechanical obstruction fever is never present and does not appear unless complications ensue. Vomiting may be present in adynamic ileus of reflex origin but it is not persistent and continuous as is invariably the case in mechanical obstruction.

The surgical procedure in intestinal obstruction will have to depend on the individual case and the judgment of the surgeon. It is my opinion that radical operative procedures have little place in the treatment of intestinal obstruction. It has been shown experimentally and there is a vast amount of clinical evidence to substantiate the fact, that an obstructed gut when traumatized always increases the severity of the symptoms and the seriousness of the case. When strangulation accompanies obstruction, due to interference with the circulation and nutrition of the intestinal wall, the severity of the symptoms is always increased, and unope-

rated death follows much more rapidly. The admonition of J. B. Murphy "to get in quickly and get out more quickly" should not be forgotten in the surgical treatment of intestinal obstruction.

Finally, fecal vomiting and distention should be forgotten in mechanical ileus and we should remember that severe colic of sudden onset, persistent vomiting and locked bowel, audible or visible peristalsis and no fever, are the cardinal signs of acute mechanical obstruction. Cathartics should never be resorted to and opiates only after the diagnosis has been completely established. If these facts are kept in mind 90 per cent. of the cases will be recognized in twenty-four to forty-eight hours, and the mortality will drop from 50 per cent. to 10 per cent. There are no greater promises of reward in the entire field of medicine or surgery than the early recognition and operation of acute mechanical ileus.

University Club Building.

#### PRINCIPLES OF THE CARREL-DAKIN TREATMENT OF INFECTED WOUNDS\*

H. E. HAPPEL, M.D.  
ST. LOUIS

Considerable confusion exists in the minds of many as to the exact meaning of the Carrel-Dakin method of treatment of infected wounds. A great many patients say that they have been under the treatment when further questioning reveals the fact that their wounds have been irrigated with a solution of sodium hypochlorite once in twenty-four hours or packed with gauze soaked in it. This explains the disparaging attitude of many.

The Carrel-Dakin method of treatment depends on four principles, each of which must be carried out with the utmost attention to detail. These principles are:

1. Surgical Sterilization.
2. Chemical Sterilization.
3. Bacteriological Control.
4. Closing of Wound.

1. *Surgical Sterilization.*—To clearly differentiate between a contaminated wound and an infected wound is extremely important. A contaminated wound is potentially an infected one but not actually so until sufficient time has elapsed for changes to take place in the tissues as the result of the presence of bacteria. Bacteria are present in both but in the latter a reaction has occurred in the tissues and changes characteristic of inflammation have taken place.

\* Read before the St. Louis Medical Society, Oct. 28, 1919.

Time is the most important element; consequently if we see a wound sufficiently early all contaminated tissue may be excised and the wound sutured, healing taking place by first intention. This is a primary suture.

From six to twelve hours are required for infection to set up so that primary suture is not to be attempted after that time. In this case all contused tissue, dirt and fragments of bone are excised, or removed, and tubes placed for chemical sterilization.

Dakin's solution will not sterilize a wound until this step has been completed. All necrotic material, sequestra, or foreign bodies, particularly clothing, must be removed before any result can be obtained with the hypochlorite solution. Metallic foreign bodies embedded in the tissues not connected with the discharging sinuses need not be disturbed.

Next in importance is the removal of overhanging edges of bone cavities or other procedure necessary to permit the soft tissues to fall in and obliterate the dead spaces. It is not necessary that this be done subperiosteally, as was taught by the French. In fact it is better that the periosteum be removed with the bone because it is usually a fibrous membrane capable of preventing the soft tissues from obliterating the cavity.

The surgical cleansing can be done to the better advantage of the surgeon and patient if a tourniquet is used since the patient loses less blood and the surgeon is better able to see the bone and tissues and do a more complete operation.

The wounds are left wide open, lateral opening Dakin tubes put in proper locations, and gauze placed in the wound to hold the tissues apart, retain the Dakin tubes in position and control bleeding. The skin surrounding the incision is protected with vaselin gauze.

It is always good policy to immobilize the part, for a time at least, to prevent refracture, hemorrhage and dissemination of infection.

2. *Chemical Sterilization.*—Dakin's solution is a solution of sodium hypochlorite, neutral to powdered phenolphthalein and alkaline to the alcoholic solution, containing not less than 0.4 per cent. nor more than 0.5 per cent. of sodium hypochlorite. Unless the solution conforms to this definition it is not Dakin's and should not be used. It is very unstable giving up its chlorin in the presence of organic matter, hydrogen peroxid or sunlight. The percentage of hypochlorite is ascertained by titration with decinormal sodium thiosulphate solution, using potassium iodid in the presence of glacial acetic acid as an indicator.

The container is a graduated bottle usually of amber colored glass, having an outlet 7 mm. in diameter to which is attached rubber tubing of the same caliber, equipped with a spring cut-

off, carrying the solution to a glass distributing tube which may have a single, double or quadruple opening depending on the number of Dakin tubes used. Four is the greatest number permissible on a single container. The inside diameter of the outlet of the distributing tubes is the same as that of the Dakin tubes, 4 mm. The perforated tubes have their ends tied with linen and the perforations are 0.5 mm. and at one centimeter intervals, alternate holes in rows at right angles to each other.

The lateral opening tube has an oval eye one centimeter from its extremity and no ligature on its end. It is useful in cup or saucer-shaped cavities, while the perforated tubes are employed on surfaces of wounds.

Tubes on the same glass distributing tube must be of the same kind, that is, have the same number of holes, otherwise all the solution will be delivered by the tube offering the least resistance to the flow, instead of the equal distribution that is desired.

The container is to be not less than three and not more than four feet above the wound. The cut-off must be released suddenly so that the solution will flush out the tubes rather than be allowed to trickle down into them. This is necessary because the solution gives up its chlorin on coming in contact with organic matter. The extremities of the tubes collect secretion from the wound and unless this is flushed out all the chlorin will be liberated by it before the solution comes in contact with the wound itself. Ten c.c. per tube every two hours is the quantity employed, but where indicated it may be increased.

The surrounding skin must be protected with strips of gauze impregnated with a mixture containing eighty-nine parts of vaselin, seven parts of paraffin and four of resin. The melting point of the mixture is above body temperature, which prevents the dressings from taking up the oil.

Dakin's solution does not attack the granulation tissue because the protein present converts the hypochlorite into chloramin which is nonirritating and has no solvent action. When it comes in contact with the stratified squamous cells of the skin, which contain little protein, it dissolves them exposing the raw surface of the deeper layers. This is called a "Dakin burn" and is best treated with zinc oxid ointment.

Dressings are done entirely with instruments and the most rigid technic must be observed. Tubes are placed in proper position and held by small gauze compresses wet with Dakin's. The proximal extremity of the tube is fixed with a strip of adhesive. Larger squares of dry gauze are placed over the compresses and the wound or extremity covered with a large gauze-covered cotton pad.

3. *Bacteriologic Control.*—Every other day the instillation of Dakin's due at the time for



dressings to be done is omitted, so that the wounds will have received no hypochlorite for at least two hours. The dressings and tubes are removed and a platinum loopful of secretion is taken from what appears to be the worst portion of the wound. This is spread as a thin film on a clean glass slide, dried and stained with a blood stain.

Under the oil immersion lens of the microscope the number of bacteria per field is counted and the average estimated. The fewer the bacteria the greater the number of fields counted. No attempt is made to count more than sixty per field, which is reported as infinity.

The count is recorded on a chart ruled in squares, the horizontal represents the number of days and the perpendicular the number of bacteria per field. In this way a curve is plotted which shows graphically the condition of each wound. When a curve which has been at zero, or sterile, suddenly takes an upward turn one of three things is the cause: insufficient quantity of Dakin's is being used, or it is not reaching all parts of the wound, or a new focus of infection has developed due to incomplete surgical cleansing.

4. *Closing of Wound.*—When a wound becomes sterile to smear one can excise the granulating surface en bloc and suture the tissues in layers. It is possible to do this when the count is below five bacteria per field but it was our custom at General Hospital No. 2 to await sterility before closure.

Cultures were made on all wounds when they became sterile to smear, and if the streptococcus hemolyticus was reported absent, secondary closure was performed. Care must be exercised to avoid dead spaces after excision of the granulating surface, muscle being used when possible to fill them. In certain cases when it is impossible to fill the cavities with the muscle or fat of the part, it is necessary to make a transplant of fascia lata. In these cases it is safer to have the wound sterile to culture. When a secondary closure is being made all the scar tissue should be excised, otherwise sutures placed in scar tissue almost invariably cut out.

At first we were accustomed to treat these cases as ordinary clean wounds and not disturb the dressings until the eighth or tenth day when the stitches were removed, unless there was an elevation of temperature or local pain, but several cases showed stitch abscesses which on study apparently developed on the surface of the skin and penetrated the wound, and this seemed likely since the skin had been bathed in pus for months. We adopted the plan of dressing all secondary closures on the second postoperative day, cleansing them with neutral soap and ether and then applying compresses wet with Dakin's solution. They were renewed daily or on alternate days according to indica-

tions and any stitches showing signs of infection around them were removed.

If pus developed in the wound a few stitches were removed, a lateral opening tube inserted and Dakin instillations given every two hours. In this way practically none of our secondary closures were failures.

#### CONCLUSIONS

The Carrel-Dakin method of treatment when carried out with strict attention to detail is the most satisfactory and rapid method of handling infected wounds.

There is no purulent discharge or offensive odor.

The bacteriologic control shows accurately whether the patient is improving or not and often indicates a newly developing focus of infection before the local signs are evident.

Secondary closure can be done with almost perfect assurance of success if the bacteriologic control is carefully carried out. It shortens the period of convalescence and avoids the dense, adherent, often deforming scar, resulting from healing by granulation. Unless all the details of the technic are mastered and carried out to the letter, the results will be unsatisfactory and Dakin's solution, another therapeutic disappointment. On the other hand, when all the minutiae are followed, the results are so gratifying that even the patients themselves become enthusiasts and refuse to consider any other method of treatment.

Wall Building.

#### MULTIPLE INFECTION \*

##### A Study of the Relationship Between Infections

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AND

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KANSAS CITY, MO.

It is more or less generally recognized that if a person has two or more infectious diseases, one may influence the other occasionally to the apparent advantage of the patient but more frequently to his disadvantage. In other words, resistance to one organism may occasionally be increased by infection with another but usually the reverse is the case; that is, resistance to one organism is lowered by infection with additional organisms. This subject has been dealt with briefly in the literature under such titles as mixed infection, secondary infection, and focal infection, but not to the extent which it de-

\* Read before the Medical Section of the Medical Association of the Southwest, Oct. 7, 1919.

\* A portion of the subject matter in this article has been reported by one of us in a monograph *Oral Sepsis in Its Relationship to Systemic Disease and in the Journal A. M. A.*, Nov. 23, 1918, Vol. 71, pp. 1703-1706.



serves. The fact has been mentioned, particularly by physicians specializing in the treatment of tuberculosis, who emphasize the fact that latent tuberculosis may become active and rapidly progressive after an attack of influenza, tonsillitis, measles, pneumonia, or other acute infectious diseases. Osler mentioned in some of his earlier writings that quiescent maladies, such as congenital syphilis and tuberculosis, may be lighted into activity by vaccination against smallpox. The Army Medical Corps almost unanimously recognized that acute infections following such maladies as measles, mumps, influenza, etc., were more than doubly serious. One of us has been interested in this subject for a number of years and has observed many and varied examples of latent and chronic infection becoming acute and severe after an attack of an acute infection of a totally different nature. For example, in one patient a urethral discharge in which gonococci were abundant was noticed a few days after a severe attack of tonsillitis. The patient gave a history of having had urethritis two years previously but since that time had apparently been well and had not been exposed to fresh infection. Chronic cystitis of a mild type may become very severe following an attack of diarrhea, cholecystitis, appendicitis, or tonsillitis. Latent syphilis may become active following an acute febrile disorder. A patient with this disease who had been thoroughly treated by one of us and who had been apparently well for several years was covered with a copper colored papillary rash and gave a positive Wassermann test at the end of the first week of convalescence from typhoid fever. Another somewhat analogous example was that of a patient who had an attack of pneumonia following an acute alveolar abscess. Several weeks later he had a recurrence of pulmonary tuberculosis that had been latent for many years and which had not interfered with a most active mental and physical life.

Chronic infections of a milder nature may also have a deleterious influence on other infectious diseases with which a person may be afflicted. This influence is often quite marked. The ill effect of chronic infections of the nose and throat on persons with tuberculosis is generally recognized, and proper local measures for the cure of these are looked on as an important part in the régime for treating tuberculosis in many institutions. Oral sepsis may have an important influence on tuberculosis, and the eradication of oral sepsis may be of material value in arresting the progress of the disease.

Staphylococcal infections of the skin, such as acne and chronic furunculosis, according to Sutton, are often more amenable to treatment after the eradication of infected tonsils, alveolar abscesses, etc. In a patient observed by the writers with staphylococcus aureus septicemia of

more than two months' duration, the temperature fell to normal a few hours after the extraction of an infected tooth and remained normal for ten days. The case eventually ended in complete recovery. The roots of the tooth showed streptococcus viridans in almost pure growth when cultures were taken, while repeated cultures of the urine and two blood cultures gave a growth of staphylococcus aureus.

One chronic mild infection may influence the course of other chronic mild infections. For example, tonsils that appear to be chronically inflamed often become smaller and appear relatively normal after the eradication of severe oral sepsis. Chronic infection of the nasal sinuses may often be reduced in severity or to apparent quiescence by the removal of infected tonsils or alveolar abscesses. Symptoms of mild infection in the gallbladder are often relieved to a marked extent by the removal of apparently trivial infections in the nose, throat, or mouth. A patient, observed by the writers, who had been subject to recurrent attacks of slight jaundice associated with slight fever and pain in the region of the gallbladder for several years and who refused operation, has been relieved for two years by the extraction of one abscessed tooth. An analogous example is that of a patient who was subject to repeated attacks of gingivitis, which had caused a moderate grade of destruction of the gum margin. The attacks were difficult to account for because the teeth were regular, occlusion nearly perfect and he had only one small filling in a nearly perfect set of teeth. This recurrent inflammatory process had resisted careful treatment by a capable dentist until an abscess, pyorrheal in origin, was discovered about one of the molar teeth. When this was extracted the gingivitis disappeared practically without further treatment and the patient's general health improved. Persistent cases of pyorrhea often yield more rapidly to treatment after the removal of chronically infected tonsils or after the extraction of abscessed teeth. Numerous similar examples with which careful observers are familiar could be mentioned.

It seems worth while at this point to make special mention of the relationship between acute or chronic sepsis and the symptomatology of syphilis, for antispecific treatment has a decidedly bad influence on pyogenic infections; on the other hand, pyogenic infections have an influence on the course of a specific disease which is so marked that physicians who neglect it are not accomplishing the maximum amount of good in their therapy. For this reason, syphilis and chronic sepsis form an unfortunate combination of diseases unless each infection is taken seriously and handled energetically. This may be exemplified by the following three brief case reports:

CASE 1.—A man, aged 35, had been treated two years for *tabes dorsalis*. Before treatment was started he had noticed slight ataxia and bladder disturbance and was subject to mild attacks of darting pains in the legs. He improved very satisfactorily under specific treatment and after he had been free from pain and bladder disturbance for more than a year, he had an attack of acute tonsillitis. With the onset of this there followed a recurrence of the most severe lightning pains that he had ever experienced. Morphine and salicylates to the limit were required to keep him out of agony. Nothing was disclosed except the attack of tonsillitis to account for the sudden recurrence of severe symptoms of *tabes*. A tonsillar abscess developed. When this was incised, the lightning pains ceased almost immediately. A few slight pains were noticed until the tonsils were removed three weeks later. During two years since this time the patient has been free from any active symptoms of *tabes dorsalis* and has required very little treatment of any kind to prevent a recurrence of his previous symptoms.

CASE 2.—A man, aged 50, with *tabo paresis*, had been given thorough antisppecific treatment for several years. When he came under our observation he was unable to attend to business, and spent most of his afternoons in bed. All known methods of treatment had been pushed to the limit and it appeared that very little improvement could be expected from further antisppecific treatment. The patient had large tonsils and several abscessed teeth. These were removed, whereupon the patient improved steadily and to an unbelievable degree. Within less than a month he was able to engage in business again. He has continued mild antisppecific treatment and has remained in active business since that time.

CASE 3.—A man, aged 45, was brought in with a diagnosis of *tabes dorsalis*. Physical and laboratory examinations left no doubt concerning this. The onset had been stormy, and for three weeks the patient had been fairly convulsed with darting pains and had hardly been able to control himself. He was so nervous and irritable at the time of the examination that it was almost impossible for him to remain quiet long enough to permit a specimen of blood to be obtained for examination. Lumbar puncture could not have been performed without general anesthesia. The teeth showed an advanced degree of sepsis. The abscessed teeth were all extracted. Within a few days the patient's condition was so much improved that he went back to work. He felt and acted like a well man even though antisppecific treatment had not yet been administered.

Many cases similar to the foregoing could be cited. These are not unusual cases but represent almost an average experience with tabetic patients who have chronic pyogenic infections.

The problem of multiple infection and the relationship which one infection bears to another is deeper and of greater interest than the simple fact that a person bombarded by two or more infections is worse off than is he who has only one. One infection has an interesting relationship to other infections with which a person may be afflicted and it is believed may be explained in part at least through phenomena described under the terms allergy, protein sensitization, and anaphylaxis.

A true toxin is not formed by any of the micro-organisms that ordinarily take part in the pathology of infection in human beings with

the exception of tetanus and diphtheria bacilli. Killed cultures of all other organisms or extracts of the organisms, or the culture medium in which they have grown, may be injected in large quantities into healthy guinea-pigs without immediate gross ill effect. They differ strikingly in this respect from tetanus and diphtheria bacilli, each of which produces a true toxin that is poisonous in high degree when administered subcutaneously even in very minute doses to animals. The products formed by other organisms that cause disease may be extremely toxic, however, through an entirely different mechanism, namely, the development in an individual of a condition known as allergy. This term, introduced by Pirquet, is used to designate the changed condition of human beings or animals, caused by infectious diseases or produced by inoculation with alien proteins, which causes the individual to react in a peculiar way if the bacteria responsible for the infectious disease or if the protein with which he may have been inoculated is reintroduced into the circulation. The ensuing reaction is in some respects protective and beneficial but in other respects may be harmful and even dangerous.

Allergy and its effects are well illustrated by the action of tuberculin. Killed tubercle bacilli or their extracts, or mediums in which tubercle bacilli have grown, may be injected in large amounts into normal untreated animals without gross immediate ill effect. If even minute quantities are injected into animals or persons with tuberculosis, however, the effect is entirely different. Instead of its being apparently inert it causes a reaction which may result quickly in death. The changed condition of the animal produced by the tuberculous infection which renders it sensitive to the products of the tubercle bacillus is the condition known as allergy. Several striking phenomena follow the introduction of tuberculin into tuberculous persons or animals which never appear in the nontuberculous. These are: 1. Pain, swelling, redness and sometimes necrosis at the site of inoculation. This is known as the local reaction. 2. A rise in temperature and pulse rate and general symptoms of toxemia, which phenomena are known as the general reaction. 3. Inflammatory changes at the site of all active tuberculous lesions. This is known as the focal reaction. This last phase is very interesting and may be used in explaining many of the phenomena observed in multiple infection, as will be mentioned subsequently. Focal reactions may be slight or may be well marked. In tuberculous individuals it may hasten the breaking down of tuberculous tissue and lead to rapid spread of the disease.

Some persons with tuberculosis become so sensitive to products of the tubercle bacillus that amounts of tuberculin as minute as 0.001 G. are



sufficient to produce reactions and to cause local inflammatory reactions at the site of all active tuberculous lesions. Others tolerate larger amounts. A reaction as described above can be produced in tuberculous animals by the subcutaneous injection of living tubercle bacilli as well as by extracts of the organisms. If tuberculous guinea-pigs are inoculated with living tubercle bacilli, a local and general reaction results within a few hours essentially similar to the reaction produced by the extracts of dead bacilli. A focal reaction may also ensue which will make every active tuberculous lesion in the animal temporarily worse. If nontuberculous animals are similarly inoculated no such reaction ensues but the animal after a period of days or weeks becomes ill and dies of tuberculosis. If a localized tuberculous lesion in human beings (such as a tuberculous joint) is subjected to massage and manipulation living tubercle bacilli or their products gain entry into the circulation and a transitory rise of temperature and other symptoms of a general reaction may follow. This may be associated with an increase in the inflammatory reaction (focal reaction) at the site of all other active tuberculous lesions with which the individual may be afflicted.

The foregoing well known facts regarding tuberculous infection and the sensitization produced by it are true of infection in general. An attack of typhoid, for example, renders one sensitive to the typhoid bacillus, ferunculosis to the staphylococcus aureus, etc., so that persons having these diseases usually show local, general and focal reactions if they are inoculated with killed cultures of the offending bacteria. This may temporarily increase the severity of the infection the degree of which would depend to a certain extent on the quantity of bacteria injected.

Persons with chronic furunculosis may give a general reaction within a few hours if they are inoculated with an excessive quantity of killed staphylococci and the furuncles may be made temporarily worse. Such persons react similarly when they are subjected to the effect of an increased number of living bacteria due to the development of a fresh furuncle. This often causes both a general and a focal reaction. For example, with the development of a fresh furuncle there may appear fever, malaise, etc. (general reaction), and exacerbation in the inflammatory process in recent furuncles (focal reaction). In fact signs of activity, such as itching and redness, may appear in the scars of recently healed furuncles. This may be followed by a discharge of pus containing staphylococcus aureus. These well known principles are true of infection in general and can be used in the explanation of many interesting phenomena. It is believed it can explain the fact that

with the onset of a new infection signs of irritation and inflammation may appear within a few hours at remote points. For example, suppose an individual who had a latent streptococcal cholecystitis should have an attack of acute streptococcal tonsillitis. We would expect theoretically that a focal reaction in the gallbladder would follow which would give rise to the symptoms resembling gallbladder infection. Likewise if such an individual had abscessed teeth one would expect repeated reactions in the gallbladder therefrom and symptoms resembling chronic gallbladder infection. Furthermore, removal of the tonsils or infected teeth might remove the source of focal reactions in the gallbladder and lead to an amelioration of the gallbladder symptoms.

The relationship of allergy to primary foci of infection is interesting not only from the standpoint of the influence which primary foci of infection play on the secondary foci but also from the standpoint of the influence which the secondary foci play on the primary. For example, if an individual has pyorrhea or recently treated or apparently cured pyorrhea what would be the effect on an attack of cholecystitis on the gums. Theoretically an allergic reaction could occur in the gums which would give all the clinical signs of recurrence of gingivitis or pyorrhea and could cause a recurrence of this disease. Practically it might be said that this very thing often arises. It has been observed by one of us a number of times. One patient subject to recurrent attacks of gingivitis could attribute nearly every recurrence to a cold followed by frontal and ethmoid sinus infection.

The following case illustrates what the phenomenon of allergy may amount to on infection in remote parts:

A woman, aged 60, relatively normal for her age, had ten infected teeth extracted. Less than twenty-four hours afterward there developed a severe follicular tonsillitis. Several days later the infection began to spread from the gums to the cheeks, pharynx and tongue, and gave rise to extensive ulcerative stomatitis. Several days later the infection became general and a fatal septicemia resulted. The point which we wish to emphasize here is the fact that the inflammatory reaction in the tonsils, while relatively distant from the gums, occurred within a few hours and preceded by several days the infection of the adjacent tissues of the gum and cheek. Infection of the tonsils by organisms disseminated from the alveolar process could not have occurred in so short a time. The attack of tonsillitis must have started as a focal reaction against the products of the organisms disseminated into the blood stream by the trauma of removing the teeth. It was analogous in every way to the focal inflammatory reaction in the lungs that may be brought about in tuberculous individuals by the injection of an overdose of tuberculin. The spread of the infection several days later to the mucous membrane of the mouth, etc., was a different phenomenon—probably a fresh infection of relatively normal tissues.

It is by no means uncommon to observe pain in the region of the gallbladder, appendix, stomach, joints, cervical glands, etc., a few hours after the extraction of infected teeth. Such may frequently be interpreted as focal reactions caused by the traumatic dissemination of micro-organisms or their products from the alveolar process.

Frequently the clinical manifestations of chronic appendicitis, cholecystitis, gastric and duodenal ulcer, chronic arthritis, etc., clear up to a marked degree after the extraction of diseased teeth, even though the first effect may have been an increase in the inflammatory processes. Occasionally chronic inflammatory conditions that appear to indicate the need of surgical interference and serious internal diseases that cannot be reached by therapeutic agents partially or wholly clear up symptomatically after as simple a procedure as the extraction of a tooth or the removal of a pair of diseased tonsils. The relief can often be attributed to the fact that sources of bacterial products that have been continuously causing focal reactions in the infected organs have been removed.

This explanation applies very nicely to multiple infection when each lesion is caused by the same micro-organism. It may or may not apply in part to multiple lesions caused by different micro-organisms. This question is an open one about which much might be said. For example, if a person has streptococcic tonsillitis, a latent streptococcic infection in the joints and in the gallbladder, it would be in harmony with the accepted theories if an acute exacerbation of the tonsil infection were followed in a few hours by a reaction in the joints and gallbladder that caused pain and other phenomena of a focal reaction. This explanation, as previously mentioned, would not apply in the same way to multiple infection if the various lesions were caused by different micro-organisms, because sensitization against the protein of an infecting organism is thought, and we believe correctly so, to be more or less specific. Whatever the theoretical explanation may be, we have this fact, which is beyond dispute: infection with one micro-organism may lower the resistance against other micro-organisms of different character to a degree that is by no means negligible. We dealt with this above and mentioned clinical examples. One further illustration even more striking may be added here:

A patient, aged 35, apparently in good health, had a severe attack of erysipelas, evidently streptococcic in origin. A few days after this a very insignificant pustule no more than 2.5 mm. in diameter which showed staphylococcus aureus on culture began to spread with great rapidity and within a few days gave rise to an extensive phlegmon which persisted for two weeks. In this instance the streptococcic infection certainly had lowered resistance against staphylococcus aureus.

There apparently exists two types of immunity—a specific immunity and a nonspecific immunity. Nonspecific immunity has been made use of in the cure of disease by Miller and Lusk, Jobling and Peterson, and others who have injected alien protein of different types (including killed typhoid bacilli) in the treatment of arthritis and other infectious diseases. While the results obtained were not invariably a complete success they were sufficiently striking to warrant the observers in concluding that nonspecific immunity is often an important factor in the cure of disease. The inoculation of infected persons with an alien protein, such as typhoid bacilli or albumose, may cause general reactions that render the patient's condition temporarily worse. Often it also causes focal reactions in infected areas. For example, in persons with arthritis the joint pains may often be made more severe a few hours after the intravenous injection of typhoid bacilli. Persons with tabes dorsalis frequently have sharp, darting pains in the legs after similar intravenous injections. The reactions that are produced by the injection of alien proteins are often very similar to reactions that follow inoculation with the specific organism that causes the patient's disease. It is not inconceivable that frequent repeated inoculations with a nonspecific virus might cause repeated reactions in inflammatory lesions due to other organisms and in this way do harm and cause an exacerbation of the disease. It is possible that one infection may exert a deleterious influence on lesions caused by other micro-organisms in some way as this by causing repeated reactions at unfavorable moments and might in part explain the fact that one infection may be cured occasionally by the removal of another infection not directly related to it.

#### PRACTICAL CONSIDERATIONS

This paper has been written because of its practical bearing on the treatment of chronic infections. Whether or not the explanations given are the correct ones this fact stands, we believe beyond dispute: In persons suffering from multiple infection, each infection may increase the severity of the others whether due to the same or to different organisms. One infection may make another infection difficult to cure and prone to recur. These facts are a matter of considerable importance, for the majority of cases consulting a physician have not one chronic infection but as a rule two or more. The truth of this fact can be seen by the following statistics:

Tabulations of 1,000 medical cases examined by the writers on account of miscellaneous systemic complaints gave the following results: Sources of chronic or frequently recurrent infection were found in 97 per cent. (this included



active tuberculosis, syphilis, chronic gastrointestinal disorders due to abnormalities in the appendix, gallbladder, to gastric or duodenal ulcer, extreme ptosis, adhesions, chronic infection in the respiratory tract, genito-urinary tract, etc.). A marked degree of oral sepsis was found in roentgenograms in 66 per cent. In 34 per cent. either none was found or the amount was slight. Diseased tonsils appeared to have been possible sources of disease in a large per cent. of the cases. The exact percentage is not given because of the uncertainty of our methods in determining that a given tonsil is free of disease. Sixteen per cent. showed chronic nasal discharge or deviation of the nasal septum, spurs, polypi or other abnormal conditions in the nose. In a minority of these was found tenderness over the frontal, ethmoid, or maxillary sinuses or shadows indicating infection past or present disclosed by roentgen ray. Sixteen per cent. of the cases had digestive disturbance or other disturbance or other symptoms associated with tenderness in the right iliac fossa. A minority of these cases were thought to have an abnormal appendix. Seven per cent. had symptoms which appeared to be attributable to the gallbladder. In addition a relatively large percentage had digestive disturbance due to either appendix or gallbladder disease, which could not be definitely diagnosed, or to adhesions, extreme ptosis, gastric or duodenal ulcer, etc. Eleven per cent. gave positive Wassermann tests. (Bloods sent in for examination because of suspected syphilis were excluded from these statistics.) In over half of these (6 per cent. of the total number of cases examined) syphilis of the central nervous system was suspected clinically and verified by lumbar puncture. In 7 per cent. the presence of active tuberculosis was positively demonstrated. A miscellaneous group of infections was found in a large number of cases. A majority of the cases had more than one chronic infection. Of the 66 per cent. having a considerable degree of oral sepsis, 72 per cent. had other chronic infections in addition. In but 18 per cent. oral sepsis was the only active infection found.

In the practice of medicine one is confronted with three classes of chronic infection. 1. Those which can be completely cured or removed (such as oral sepsis, chronically infected tonsils or chronic appendicitis). 2. Those which can be removed only with great difficulty (such as chronically infected gallbladder or ethmoid sinuses). 3. Those which cannot be removed or completely cured (such as chronic nephritis, myocarditis, advanced tabes dorsalis, or advanced tuberculosis) and have to be treated with palliative measures and protected from further injury if possible.

The most favorable cases for treatment are of course those of class one, for in them every

chronic infection can be completely and easily removed. The problems of multiple infection are possibly even more interesting in the treatment of the third class of cases, however, for often it offers a patient his only means of relief. Frequently when an individual has an incurable infection a palliative and sometimes a brilliant result can be obtained by removing his other less serious infections. In other words, if the little infections are cared for the more serious ones may spontaneously improve.

Waldheim Building.

#### THE CENTENARY OF THE STETHESCOPE \*

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The two small books which I have here, printed in French, bear the date of 1819: they were as a matter of fact first issued from the press in September of that year, just a hundred years ago. They are of course the two volumes of "Treatise on Mediate Auscultation," by R. T. H. Laennec. I think it may without exaggeration be said that from their issue modern clinical medicine is dated. By that I mean the application of exact methods of examination and comparison of the findings during life with postmortem appearances. It is true that percussion was discovered and described about fifty years before (1761). But it was only shortly before the publication of Laennec's treatise that Avenbrugger's work was given general publicity, and that by Corvisart, Laennec's teacher. The publication of this book made scientific methods general in the diagnosis of disease of the heart and lungs. After it came Bright and Addison, giving the world a scientific method of diagnosis of diseases of the kidneys by urinalysis. After it came Duchene and Romberg, giving the world a scientific set of methods for examination of the nervous system. After it came Virchow with the development of microscopic pathology. After it came Kussmaul with a scientific method for examination of the stomach; Ehrlich, with a scientific method for examining blood; Widal, Wassermann and the development of serology; Roentgen and the men who developed the roentgen ray.

I think this book is as much an epoch-making landmark as the discovery of the steam engine, and perhaps has done as much good as the telephone in making modern life comfortable and happy. We are accustomed to think of the benefits of modern life as being due to the invention of big things, when a very fair case could be made out for the equal advantage of our possessing less astonishing things than automobiles and telegraphy—such as spectacles, bichlorid tablets, safety razors and stethoscopes.

\* Read before the Jackson County Medical Society, Sept. 30, 1919.

Rene Theophile Hyacinth Laennec was born at Quimper in Lower Brittany on Feb. 17, 1781. His father was an advocate, of whimsical disposition, and Laennec's most distinguished biographer in English states that he inherited his father's more solid parts: that he was without his volatility, but also without his wit. His mother died of tuberculosis when Laennec was very young, and for some reason which does not appear he was transferred from his father's care to that of an uncle, a practitioner of medicine at Nantes. His uncle seems to have been a man of some parts and more than ordinary distinction. He was professor of medicine and materia medica in the University of Nantes. Under his tutelage Laennec early showed a disposition toward medicine as a career and became a pupil of his uncle, also attending the courses in anatomy in the university.

He lived in days like ours. The old social order was breaking up. The French revolution was all about him. The wars of the Republic and wars of Napoleon went on while he calmly dissected his pathologic specimens. While most of his countrymen were aflame over the conquest of Italy, he was aflame over the possibilities of more necropsies. While some men searched for an economic panacea, he searched for râles and bruit. It was as if he lived in the Russia of 1919 during his apprentice days, unmindful of enthusiastic social theorists, unmindful of the ring of hostile armies, unmindful of the successes of the Soviet army, careful only of that inner light that could not be satisfied no matter how much fuel it was fed.

In 1799 he served for a time in the military hospitals at Nantes as surgeon. Shortly afterward he went to Paris to complete his medical studies. And here he met Bayle as a fellow student and Corvisart as a teacher.

This great man deserves more of praise than he usually receives. He was one of those commanding figures, incapable themselves of great original research, but productive by their example and their inspiration of the highest amount of original work in others. In our own day William Osler is such a man. Corvisart was the Osler of his time. He had the most generous of natures; he was sufficiently big that he delighted in other men's success, and was as different as possible from that arbiter so scorchingly described by Pope:

"Who too fond to rule alone  
Bears, like the Turk, no brother near the throne,  
Views him with scornful yet with jealous eyes  
And hates for arts that caused himself to rise.

Willing to wound and yet afraid to strike,  
Just hints a fault and hesitates dislike."

You recognize the picture doubtless. There was nothing of that in Corvisart. He himself rediscovered the method of percussion, and when he found the then obscure and forgotten

treatise of Avenbrugger, gave the latter full credit and by his efforts made universal the practice of percussion. If it had not been for Corvisart percussion would possibly still be a forgotten method.

Under the inspiration of such a teacher, Laennec naturally enough became proficient with the percussion method of studying disease of the chest. But his prime passion for many years was pathologic anatomy. He studied it, however directly in relation to its bearing on clinical medicine. He collected, during his three years as pupil at La Charite, nearly 400 cases which had all been observed first in the ward and then in the morgue, and correlated the respective findings.

His first published writings appeared in 1802 in the *Journal de Médecine*, and were descriptions of some diseased hearts. In the same year he published his "Histories d'Inflammation du Péritoine," a series of case histories with necropsy findings of peritonitis. A course of lectures on pathologic anatomy given in friendly rivalry with Dupuytren, a monograph on hydatid worms, one on melanoses, and another on the membranes of the brain, spleen, kidney and liver (Laennec's cirrhosis), still another on angina of the chest, were published in the years up to 1806.

He had in the meantime devoted himself to building up a private practice. Of the next ten years of his life we hear little. His health was never strong and the demands of practice compelled him to give up a great deal of his teaching work. He labored on certain articles for the dictionary of the Society of Medicine, one of the numerous encyclopedias that followed the inspired efforts of Diderot. He volunteered to serve in the hospitals of Paris when they were filled with the wounded of 1814. We are told that he was particularly happy in dealing with a ward of homesick Bretons to whom he spoke in their own language.

In 1816 he was appointed chief physician to the Necker Hospital, and in that year the great event of his life and one of the greatest in the history of medicine occurred. It may be best told in his own words:

In 1816 I was consulted by a young woman laboring under the general symptoms of diseased heart, and in whose case percussion and application of the hand were of little avail on account of the great degree of fatness. The other method just mentioned being rendered inadmissible by the age and sex of the patient, I happened to recollect a simple and well-known fact in acoustics, and fancied it might be turned to some use on the present occasion. The fact I allude to is the great distinctness with which we hear the scratch of a pin at one end of a piece of wood, on applying our ear to the other. Immediately, on this suggestion, I rolled a quire of paper into a kind of cylinder and applied one end of it to the region of the heart and the other to my ear, and was not a little surprised and pleased to find that I could thereby perceive the action of the heart in a manner much



more clear and distinct than I had ever been able to do by the immediate application of the ear. From this moment I imagined that the circumstance might furnish means for enabling us to ascertain the character, not only of the action of the heart, but of every species of sound produced by the motion of all the thoracic viscera, and, consequently, for the exploration of the respiration, the voice, the rhonchus, and perhaps even the fluctuation of fluid extravasated in the pleura or the pericardium. With this conviction, I forthwith commenced at the Hospital Necker a series of observations from which I have been able to deduce a set of new signs of diseases of the chest, for the most part certain, simple and prominent, and calculated, perhaps, to render the diagnosis of the diseases of the lungs, heart and pleura as decided and circumstantial as the indications furnished to the surgeon by the introduction of the finger or sound, in the complaints wherein these are used.

In May, 1816, he presented an outline of the principle of the stethoscope and gave a public demonstration of it. He devoted nearly all of his time for the next two years to a painstaking accumulation of observations and case histories by the use of the new method. In June, 1818, he communicated his results to the Academy of Sciences. This report was favorably received and was commented on by a special committee of the academy. For the next year he collected, arranged and committed to the paper the facts for "The Treatise."

His first edition was published in September, 1819. A second edition, completely revised, and from which was made the usually quoted English translation, was published in 1823. The editions are different in many important respects.

From 1818 to 1821 he was compelled by his health to retire to his home at Quimper. He was the victim of what was then called a slow nervous fever, and it was reported as a proof of the nervous origin of the affection that it disappeared in a short time by residence in the country. He had dyspnea without cough and great muscular debility.

In July, 1822, he was appointed to the chair of medicine in the College of France, having returned to Paris in 1821. From that time with some interruptions he continued to teach the method of observation which he had originated at La Charité and other Parisian hospitals.

In 1826 his health, long unstable, broke down completely. He had a dry cough, pains in the chest, a diarrhea and a fever. In April his dyspnea was so great that he decided to return to his old home in Brittany. He never left the place again, and died there, probably of fibroid phthisis or pleural effusion, on Aug. 13, 1826. Before he left Paris, Drs. Recamier and his cousin, Meriader Laennec, discovered "imperfect but evident pectoriloquy under the clavicle and in the supraspinal fossa of the left side." When he died he was in his forty-fifth year.

Of the book itself the best advice that can be given is to read it from cover to cover. No more satisfying collection of clinical observations has

ever been published. The great thing about Laennec was that he not only discovered a method—many men have done that—but he perfected it. What has been added to physical diagnosis of the chest since Laennec's time if boiled down would hardly fill an ordinary magazine article. More has been added to our knowledge of the auscultation of the heart than of the lungs.

Here is the list of headings in his chapter on mediate auscultation:

Section 1.—Auscultation of the respiration.

Vesicular respiration.  
Bronchial respiration.  
Cavernous respiration.  
Blowing or puffing respiration.

Section 2.—Auscultation of the voice.

Bronchophony.  
Pectoriloquy.  
Aegophony.

Section 3.—Auscultation of the cough.

Section 4.—Auscultation of other sounds.

Different kinds of rhonchus.  
Moist crepitous rhonchus.  
The mucous rhonchus.  
The trachial rhonchus.  
The dry sonorous rhonchus.  
The dry sibilous rhonchus.  
Dry crepitous rhonchus or the metallic tinkling.

Can any one suggest any important addition to add to the outline of a lecture on auscultation of the lungs to a medical class this year?

I wish that I could quote to you at length some of the descriptions Laennec gives of physical signs in pneumonia, in asthma, in tuberculosis and in pleurisy. One passage is singularly interesting to us just now. He describes the peculiar features of "the catarrhal epidemic of 1803, denominated the grippe." He says that the "numerous cases of pneumonia which occurred during the winter of that year were all marked by a peculiar expectoration." It was a glutinous expectoration (Part 2, Book 2, Chap. 4, Sect. 2).

He misses nothing—appearance of the patient, symptoms, signs, sounds, sputum, fever. His chapters on treatment are remarkably sound.

His points are illustrated by case histories and verified by necropsies. The section on diseases of the heart is by no means so modern in tone as the section on diseases of the lungs. He treats of hypertrophy of the heart, of excrescences of the valves, of pericarditis. He describes well the normal sound of the heart, and a "bellows sound" that corresponds to our term murmur. He is at a loss, however, to explain this bellows sound, as he says he has dissected many bodies in which it has been heard, and while he has sometimes found pathologic conditions he has also found very often perfectly normal and healthy hearts.

The book throughout is written in that leisurely manner of which we seem to have lost

the knack nowadays. "These are important matters," Laennec seems to say. "There are many sides to them, many opinions have been vouchsafed upon them. I will tell you all about them. In heaven's name let us sit here quietly and ruminate upon them at length and become not too distracted with the noise of the world's babblings."

After Laennec's day, the sounds which he described and the use of the stethoscope became the center of acrid controversies. These controversies were carried on in all parts of the world. A perfect multitude of physical signs were described. Broussais and Bouillard (who discovered the relationship between rheumatism and valvular disease of the heart) were the chief contenders in the field. Each left a school. Each described a host of signs each one of which was supposed to be specific for a particular disease. Oliver Wendell Holmes has cleverly satirized this period in a poem in which he imagines two flies and a spider have become imprisoned in the stethoscope of a young physician fresh from Paris:

The bruit de rape and the bruit de scie  
And the bruit de diable are all combined.  
How happy Bouillard would be  
If he a case like this could find.

The air was cleared by the work of Skoda, who classified the sounds heard in the chest on a more rational basis and rejected forever the specificity of any one sound. Traube later carried on this work.

In England, Corrigan, by describing once and for all aortic insufficiency and all its signs, did much to further the progress of diagnosis in heart disease. Graves, in his clinical lectures, commented often on physical signs; and Addison and Bright carried on the work of description in lung disease. Little is known of the many fine papers written, especially by Addison, on lung abscess and gangrene.

Of Laennec's personality we know quite a little. He was of small stature and thin, but early in his life showed great muscular prowess. He considered himself a "Hercules, and he was but a breath of air," and took more pride in his athletic than his intellectual achievements. In the later years of his life he became astonishingly attenuated. His victorian biographer reminds us that "in estimating the value of his labors, it is necessary to keep in view the state of his health, for if great results were produced under constant pressure of disease, it is reasonable to suppose that his mind was capable of much greater effort, if it had been happily united with a material fabric of much greater strength.

The portraits we have of him are a medallion and the usual classical portrait by an unknown hand. He is dressed in the robes and neckcloth of a doctor of the faculty. The face is a typical

Breton one. It is a long face gazing at you calmly, even casually, with the eyebrows raised. The mouth is the center of the visage, with its thin lips turned up so sharply at the corners, giving an expression which in the unsuccessful is called stubbornness; in the successful must be regarded as singleness of purpose. All the portraits show this. Then that long—enormously long—caustic intellectual upper lip! It is a face of character—there is reserve there, a self-centered face, but utterly sure, reckless of the rest of the world.

He was at his best, I suppose, in his ward. I fancy him coming along, in his quick French way, a slight figure, trailed by a group of students, and making for one particular bed, whose patient illustrates the things he has been talking about. He motions the clothes off, somewhat brusque, if our descriptions are exact, and then running over the chest himself to verify the findings before he lets the others listen. He clucks impatiently if you do not hear him immediately, and nods gravely if you do. He is quick now, but behind all that lay hours and hours of careful listening himself to many chests. Think of being the very first to listen to a lobar pneumonia or a mitral regurgitation. I would rather many times have been Laennec than "stout Cortez," who was really Balboa standing silent on the peak in Danén.

I will confess that Laennec is one of my own prime heroes. I know his book I fear far better than I know my bible. It is a never-ending delight. But it is not alone the greatness of his work that holds one—great as that is; it is also the personality of the man. Under difficulties of no inconsiderable amount, in times of no little stress, he applied himself to one thing, which he had genius to see was real, and brought it to perfection. His figure is perhaps not so heroic as Vesalius; nor was his intellect of that bright clarity of Harvey's; but surely just below those giants of our science he stands foremost in that fine group of those who knew the truth and followed its lamp.

310 Rialto Building.

## KIDNEY INJURIES\*

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Injuries to the kidney are not common either in war or in peace. In the European war the kidney was involved in about 7.5 per cent. of abdominal wounds and in a little less than half of these the kidney was the only organ involved. In civil practice injuries to the kidney are comparatively rare and are generally not compli-

\* Read before the St. Louis Medical Society in a Symposium on "Kidney Surgery," Oct. 19, 1919.



cated by injuries to other abdominal organs. A bullet wound may sever the great vessels leaving the kidney intact, or may divide the ureter. Rupture of the parenchyma of the kidney may or may not involve the capsule and the resulting hemorrhage may or may not drain into the kidney pelvis. These are practical points bearing directly on the symptoms and diagnosis. If the laceration drains directly into the kidney pelvis and there is no injury to the ureter or the extra renal portion of the pelvis, a profuse hematuria will result. Such cases offer a fairly good prognosis if let alone, provided there is no great amount of shock and tumor and pain are moderate. If, however, the ureter has been divided or the hemorrhage is subcapsular or the capsule has been torn giving rise to an extra-renal hematoma, there may be no blood in the urine whatever and yet these are the conditions which will require surgical intervention.

We should therefore never be misled by the absence of hematuria. The presence of shock, together with pain and tumor in the renal region will direct our attention to the kidney. The patient should then be catheterized and if the first urine that comes is entirely clear we must not conclude that hematuria is absent. That first urine is the urine that was in his bladder at the time that he received his injury. Since then he has been lying on his back and what bloody urine may have come down will be underneath the clear fluid which we are withdrawing. Wait until the flow stops. Then withdraw the catheter a little way and collect the dram or two which now flows in a test tube. Often these last two drams of urine will show the blood where the rest of the urine does not.

If no hematuria can be demonstrated we may still be in the presence of a renal injury of the very gravest nature, and failure to establish the diagnosis may very readily cost the patient his life. Exploratory laparotomy is to be condemned for the reason that the route is a very bad one for operations on the kidney, and also because great shock will result if after a laparotomy the patient is turned on his side and a lumbar incision carried out. According to H. H. Young in his "Manual of Military Urology," when in doubt the lumbar incision should always be made first and this seems to be the consensus of opinion on the subject.

In most cases, however, there will be sufficient time for a preliminary cystoscopic examination, and this is especially important where no hematuria is present. Our purpose is to demonstrate whether or not a kidney lesion is present, and in order to do this we wish to collect all the urine which comes down from the injured side during a given interval. The best way to be sure of doing this is to pass a Garceau catheter into the ureter on the injured side. This catheter is of such large caliber that it does

not permit of any leakage around it and if no urine appears through it we may be certain that none is coming down. We are therefore dealing with a severed ureter or with a rupture of the kidney capsule permitting an extravasation of urine and blood into the perirenal tissues. The pelvis may be torn or the ureter may be blocked by a clot in the pelvis. A phenolsulphonephthalein test should be made, the urine from the sound kidney being collected from the bladder, and having demonstrated that a good kidney exists on the opposite side the information necessary is at hand. In very obscure cases a pyelogram should be made at the same time, immediately before the phenolsulphonephthalein test. This should tell us whether or not a rent in the pelvis or ureter is present. If so, we must operate and the extravasation of the thorium nitrate together with the blood and urine can do no harm.

As to operative procedures the lumbar incision should be made in all cases. This is a rule which scarcely admits of any exception whatever. The surgeon who suspecting a kidney injury does a laparotomy in order to be sure that he is not dealing with something else is taking a very grave chance with his patient's life. If exploratory operation is unavoidable. The lumbar incision should be made and then if the kidney is proven sound a laparotomy may follow.

Conservative procedures are often possible. A torn pelvis may be sewn up. If bleeding has ceased mere evacuation of the hematoma and packing of the wound may be all that is necessary. It is generally safer, however, to establish counter drainage of the kidney pelvis through the kidney parenchyma as this not only drains the kidney pelvis but also guards us against the formation of a subcapsular hematoma, a very serious condition.

Remember that the arteries to the kidney are terminal arteries and that if one of them is tied that portion of the kidney supplied by it will die. It should therefore be resected. Resection of the lower lobe of the kidney is more successful than that of the upper lobe. In fact if the upper main branch of the artery has to be tied nephrectomy should be performed.

In dealing with wounds of the ureter it is rarely wise to attempt a primary complete anastomosis. If the ureter is completely divided the best procedure is generally to bring the upper end out into the loin for drainage. If the lower end can be found it should be sewn into the lumbar incision also. Later we may be able to establish connection or we may have to do a nephrectomy, but primary nephrectomy is dangerous. If the ureter is merely laid open but not completely divided we should pass a fine ureteral catheter down into the bladder and upward into the kidney leading it out through the kidney

substance into the loin. The tear in the ureter may be then loosely approximated and a drain left near the site of the suture. A urinary fistula will probably result but will heal in time.

In conclusion I should like to emphasize that the same principles apply when dealing with kidney injuries as when dealing with other kidney lesions. There is generally ample time for careful preliminary examination and accurate diagnosis. Then when the knife is resorted to we can go directly to the spot, do just as much as is necessary and no more, minimize shock and sepsis and save life, whereas if we operate without preliminary cystoscopic examination, and especially if we do exploratory laparotomies, we shall add almost certainly to an already long and doleful list. And finally, let us cease to worry about profuse hematuria. These cases present a better outlook, other things being equal, than those in which hematuria is absent. These latter are the cases which ought to worry us and which should be given every possible advantage that may be derived from careful study.

De Forest reports the case of a little girl who was injured by falling under a hobby horse. She was able to be up at play after a few days but complained always of some pain in the renal region. She was seen by a number of physicians over a period of six weeks. Blood was constantly absent from the urine. An enormous mass gradually made its appearance in the upper abdomen. Finally at the end of six weeks laparotomy was performed and the patient died. It was thought that a sarcoma was present but necropsy revealed the following interesting condition:

There was a subcapsular hematoma which had dissected the capsule up from the kidney substance and stretched it to this enormous extent. The author states that immediately before operation the patient presented much the appearance of a woman at full term.

Cottam reports a kidney abscess cured by nephrectomy ten years after the receipt of the injury.

Judd reports two cases of spontaneous rupture of the kidney.

A personal case to me very interesting is that of a soldier who fell out of bed. He was brought into hospital the next morning and when I saw him his urine was the color of Bordeaux wine. He was not greatly shocked. His pulse was good. Pain and tumor were not excessive. He was treated expectantly. His urine remained very bloody for forty-eight hours, and then gradually cleared. He made an apparently good recovery. It was not possible to follow him, but he was able to leave the hospital feeling perfectly well without an operation.

University Club Building.

## PSEUDO-APPENDICITIS \*

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By "pseudo-appendicitis," is meant a condition in which the clinical picture portrays symptoms complex similar to appendicitis. Such a line of symptoms may be brought about by the more rare abdominal conditions and anomalies or of pathological processes in the pelvis and peritoneal cavity, in which the symptomatology is not classical but deceptive. Among them I would enumerate gastropothesis, Meckel's diverticulum, Lane's kink, Jackson's band, hernia, dysmenorrhea, right sided tubal diseases, right sided tubal pregnancy, gastro-enteritis, floating kidney (Dietl's crisis), ureteral calculi, ureteritis, strangulated ovarian tumor, gastric ulcer, cholelithiasis and right perinephritic abscess.

In simple acute appendicitis of a typical form in which we have the usual symptoms of an



Fig. 1.—Diagnosed chronic appendicitis. The appendix was normal but a cord-like structure extended from the fimbriated end of the Fallopian tube to the cecum, which caused kinking and constriction of the intestine.

acute onset with the usual symptoms of rising temperature, vomiting, acute abdominal pain referred to the umbilical region, with intense pain in the right iliac region on pressure, the condition is readily recognized; and yet, there remain appendicular implications to be ruled out. By appendicular implications I have reference to such conditions as right sided tubal pregnancy or right sided salpingitis involving the appendix.

On the other hand, the diagnosis is more difficult in postcecal suppurative appendicitis, chronic atrophic appendicitis, appendicitis in children in which the appendix is low in the pelvis or high and retrocolic; and perforation of the appendix without inflammation.

Those of you who have practiced surgery for a number of years can recall a few cases that have undergone operations for appendectomy

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but were not relieved of the symptoms for which they applied for treatment.

It is the class of ailments which are non-inflammatory that are as a rule mistaken for appendicitis or appendicular pathology, especially for the nonacute inflammatory types of appendicitis.



Fig. 2.—Diagnosed chronic appendicitis. The appendix was normal but a serous band bound down the ileum at a point about three inches from the cecum, causing kinking of the intestine.

Prior to the employment of the roentgen rays in gastro-enterological examinations gastrop-tosis was perhaps one of the most usual conditions to betray the diagnostician to a mistaken diagnosis of appendicitis. The chief points for differentiation consist in that in gastrop-tosis



Fig. 3.—This case was operated for chronic appendix. The symptoms were not relieved. Three years later the structure covering the cecum, with an upper taut edge, was found and removed, relieving the symptoms.

there is no rise of temperature, no increase in the leukocytes, and no acute pain in the right iliac region. The roentgen-ray will reveal the ptosis and flexions. Patients with gastrop-tosis are always lean individuals, with a "high pointed" epigastrium. The stomach is usually distended, and in many of the cases there is more or less of a stenosis of the pylorus.

Meckel's diverticulum and other diverticuli, are rare forms of congenital defects which often cause a possessor to be operated for appendicitis without relief of suffering.

The differentiation of symptoms produced by these structures from appendicular symptoms differ with the anatomy, position and condition of the abnormal structures. When Meckel's diverticulum produces *complete* obstruction of the bowels the symptoms are those produced in any form of *complete* obstruction of the intestines. When it causes intermittent stasis by reason of traction or flexion, the pains come on quite abruptly causing more or less severe abdominal pain, without rise of temperature, leukocytosis nor any particular localized pain. The pain may be rather slight and of short duration



Fig. 4.—This case of abdominal pain was subjected to appendectomy but not relieved of the symptoms. About a year later the oviducts were removed without relieving her. On operating we found a double layer of serous structure uniting the upper portion of the rectum and lower sigmoid to the posterior surface and fundus of the uterus. The structure resembled mesentery.

or very intense, sickening, causing more or less nausea and vomiting, which may last for several hours to a few days; they come on irregularly, but as a rule more so during constipation. Roentgen ray will usually help to clear the diagnosis.

In diverticulitis or inflammation of these structures, the differential diagnosis from appendicitis is not easy. The symptoms are similar to appendicitis, excepting that the acute pain on pressure will not be at McBurney's point, but at the location of the diverticulum, which is usually to the left side. In diverticulitis of the sigmoid, the diagnosis may be more readily cleared by the roentgen ray if the bismuth mix-

ture is injected into the bowels. In diverticulitis of diverticuli of the cecum and ascending colon, it is very doubtful if preoperative differential diagnosis from appendicitis can be made even by means of the roentgen ray.

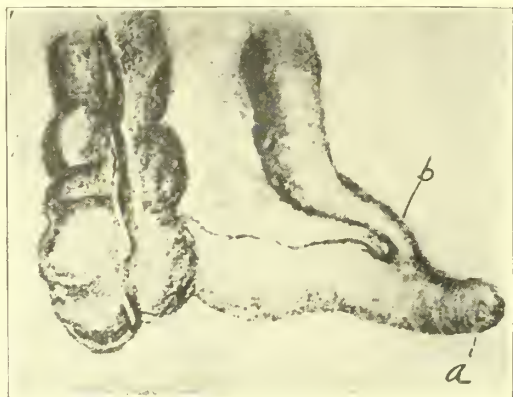


Fig. 5-A.

Partial and temporary obstructions to lumen of the intestines by reason of congenital bands or so-called "kinks," are differentiated by the fact that here we have no rise in temperature, no leukocytosis, very little or no local tenderness, no tenderness at McBurney's point. The outset of the symptoms are usually sudden and "sickening" pain generally referred to the epigastrium, and radiating downward, with nausea, with or without vomiting. The symptoms usually last only a few hours but may last twenty-four hours or more.

There are a variety of bands that cause more or less constant distress for the reason that they produce traction or kinking, espe-

cially in the female. Among them may be mentioned tubal, ovarian and uterine adhesions to intestines and mesentery, Meckel's diverticulum, uteroparietal bands by Kelley's uterine suspension and other causes.

Right sided tubal pregnancy has many times been mistaken for appendicitis. Where the appendix is not implicated this condition can easily enough be differentiated. The history will show cessation of menstruation and other symptoms similar to pregnancy and the absence of leukocytosis and no rise in temperature. Bimanual examination reveals a mass far down in pelvis, fixed and painful.

After rupture of the pseudo-uterus there will be, in addition to the aforementioned symptoms, a very sudden oncome of severe pain, and in many cases shock and signs of hemorrhage. In the beginning temperature may be below normal and rarely ever reaches 100 degrees F.

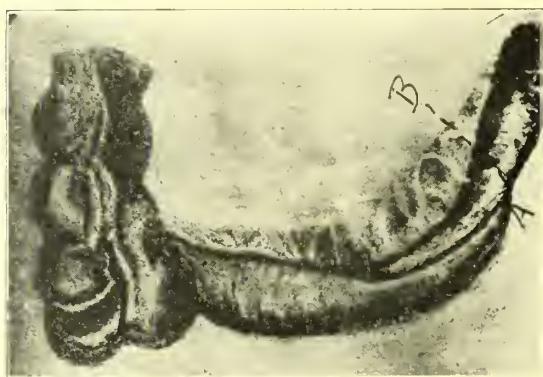


Fig. 5-C.

Figs. 5-A, 5-B, 5-C.—A case of abdominal pain, subjected to appendectomy without relief of her distressing symptoms. Four years later her ovaries and tubes were removed by a famous surgeon without giving her any relief. Five years later we found A, Meckel's diverticulum, a, about twelve inches from the ileocecal junction, and a funnel-like process of the proximal portion of the ileum which ended in a very narrow opening into the distal portion b. We corrected this condition by utilizing the Meckel's pouch to enlarge the narrow portion; B—by incising from A to B, and anastomosing the diverticulum to the narrow ileum, as in C.



Fig. 5-B.

cially so during the patient's activity. Most of these conditions can be diagnosed by the help of roentgen-ray, by the history and careful and patient observation. Many of these are found in the lower abdomen and pelvic region, espe-

Tubal pregnancy with appendicular implication can be differentiated from acute appendicitis by the aforementioned history and examination. I operated on three such cases, two of which were acute ruptures at about two months; both cases were diagnosed acute appendicitis by the attending physicians; the third case with an extraordinary history, was referred to me with a diagnosis of right ovarian tumor. She gave a history of having suffered a very severe attack of appendicitis four years prior to consulting me which confined her to bed for a number of weeks. Two years later she gave birth to a full term child. On operating I found the fetus of four years previous, still suspended in the interligamentous rupture and the appendix perfectly fused into the ectopic uterus.



Salpingitis and other diseases of the oviducts are quite common, and so much has been written on the subject that this condition should not be mistaken for appendicitis.

Right sided hernia should be differentiated from appendicitis without difficulty. I have operated on two strangulated hernias in which the appendix and a small amount of omentum was the protruding mass, and four cases of sliding hernias of the right side in which the appendix was attached to the hernial sack. In none of the cases were the symptoms other than are usually observed in strangulated hernias.

Right sided ureteral calculus might be confused with appendicitis. The pain here is very sudden, begins in the lumbar region and radiates to the ilioinguinal region, tenesmus of bladder, pain may be referred to the urethra, glans penis, testicle, or thigh; no tenderness over McBurney's point, blood in the urine, and roentgen ray will aid in clearing the diagnosis.



Fig. 6.—Gastropnoesis with pyloric stenosis at a. This was a five-hour retention and it took the stomach 70 hours to empty. These cases have frequently been mistaken for chronic appendicitis. (Print from the laboratory of Dr. E. H. Kessler.)

Perinephritic abscess of right side is rather difficult to differentiate from postcecal suppurative appendicitis when located high. The history of the case will be most important. Suppurative perirenal inflammatory process is rather slow in development, while an appendicular abscess develops more rapidly. In cases under my observation the postceco-colic abscesses were more elongated and the kidney could always be palpated above the abscess. In perirenal abscess the mass is more diffuse, the kidney more or less involved in the suppurative mass.

Floating kidney (and Dietl's crisis due to this condition) on the right side, can easily be excluded from appendicitis by the history, the suddenness of the attack of the crisis, the absence of leukocytosis, normal or only slight rise in temperature.

Dragging, sickening pain on the right side, due to an undescended testicle, should not be mistaken for chronic appendicitis. The unde-

scended organ can usually be located and its absence in the scrotum may be noted.

Perforated gastric ulcer may be mistaken for appendicitis, especially of the gangrenous or perforated type.



Fig. 7.—Case of diverticulitis; a few are pointed out by a. These cases simulate appendicitis. (Print from the laboratory of Dr. E. H. Kessler.)

In gastric perforation there is usually a history of gastric disturbances, in some cases for many months and in others for years. There may or may not have been vomiting of blood or occult blood in the stool. The patient is usually a lean, anemic individual.

The attacks come on suddenly causing very severe pain in the epigastric region and there is a board-like rigidity of the muscles in the region of the epigastrium. If the perforation occurs at the lesser curvature, which is the usual site, the rigidity will remain localized for some time,

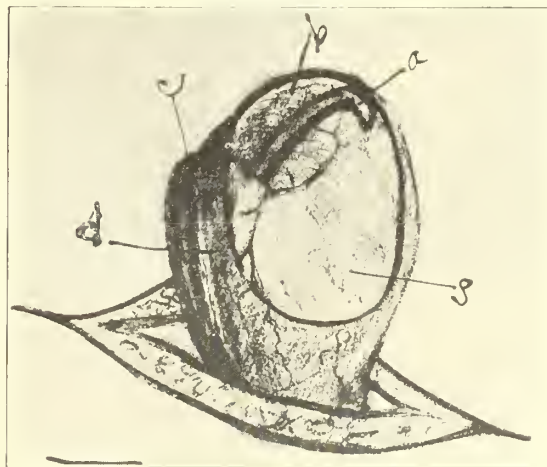


Fig. 8.—Appendix implicated in the sack of a sliding hernia. Sack, s, is fashioned from peritoneum, appendix a, mesoappendix b, cecum and colon c, divested of the mesocolon d.

depending more or less as to the character and quantity of exudate; and in rare instances it becomes walled before general peritonitis is produced. In the early hours the pain is always in the epigastric region.

In appendicular perforation the pain is in the appendicular region, radiating to the umbilical and pelvic regions. As a rule vesicular tenesmus, painful urination, and at a later period there may be rectal tenesmus.

Inflammation of the ileocolic glands will give a false clinical picture of appendicitis which is

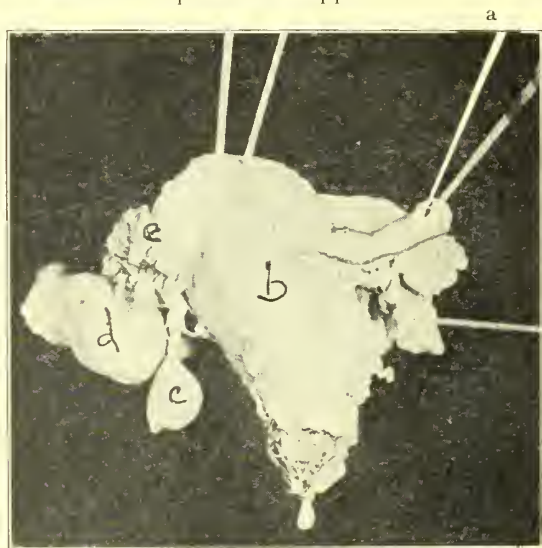


Fig. 9.

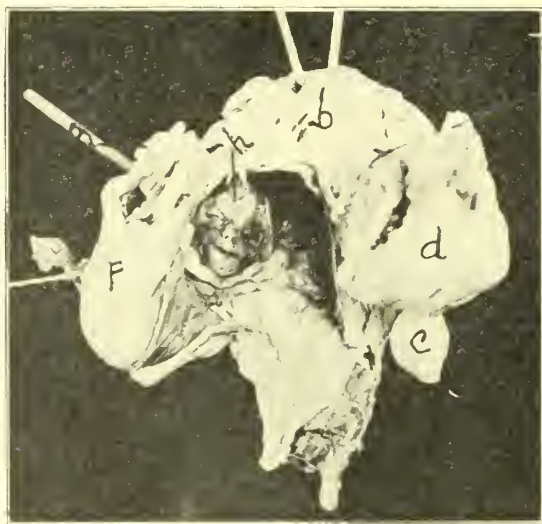


Fig. 9-A.

Figs. 9, 9a.—Appendicular implication in an ectopic (tubal) pregnancy, of 4 years standing. History given by patient indicates that the interligamentous rupture occurred at the third month; the diagnosis at that time was "appendicitis" and the patient was seriously ill. The patient gave birth to a full term child two years prior to the removal of the ectopic mass. Appendix a, pseudouterus b, hydatid of Morgagni c, ovary d, fimbria e, fetus f, feet g, head h.

not easily differentiated from appendicitis. In this condition we may find more superficial inguinal glands enlarged, the symptoms develop more gradually, and the gastric symptoms are not observed.

I have enumerated such conditions as have come to my attention and which are peculiar in producing the pseudo-appendicular clinical picture. I am conscious of the fact that other unusual conditions may arise in the abdomen and pelvis that may simulate appendicitis.

When operating for appendectomy and finding *no* gross pathological changes in the appendix, we make it a rule to examine the cecum, colon and ileum for congenital defects, and keep in mind diverticuli, bands, enteroliths, ileocolic gland affections, etc.

In conclusion I recall the following signs which have proven helpful in the diagnosis of appendicitis:

1. Horn's sign: Traction on spermatic cord causes severe pain.

2. Bastedo's sign: Pain right iliac fossa on inflation of colon with air.

3. McBurney's sign: Pressure at McBurney's point causes pain in that region.

4. Wachenheim's sign: Rectal palpation.—Finger must be introduced painlessly and slowly toward the right iliac fossa; hand gloved and well lubricated. If appendicitis, sharp pain is elicited.

5. Psoas muscle counter pressure: Patient with extended limb raises foot while lying in a horizontal position and the examiner makes gentle pressure over McBurney's point. This will be painful in case of appendicular pathology.

6. Aaron's sign: Continuous firm pressure with ends of the first three fingers over McBurney's point, frequently induces distress or pain in epigastrium, left hypochondrium, umbilical region. Also that while such pressure is produced, under roentgen-ray pylorospasm may be noted.

7. Castor oil test: When a large dose of castor oil is administered to a patient with chronic appendicitis it will cause an exacerbation.

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#### THE DANGER OF THE UNGUARDED USE OF HELIOTHERAPY IN LARYNGEAL TUBERCULOSIS

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There has recently been a general revival of interest in the use of heliotherapy and phototherapy in the treatment of laryngeal tuberculosis. In the application of these measures to bone and joint tuberculosis it is well recognized that pulmonary lesions if existent may be activated by the treatment. On the other hand, the contributions to the literature of heliotherapy as applied to the larynx make but little mention



of any possible ill effect, some of them even recommending apparatus to enable the patient to carry out the treatment at his own discretion.

When one reflects that in the treatment of the larynx the use of the 3.5-inch concave mirror on an area of 0.5-inch in diameter means a concentration of forty-nines times that of direct sunlight, and that the tubercles lie directly under or in the mucous membrane without the protection of the various layers of skin, fascia, etc., which overlie joint lesions, it is evident that a destruction of the bacilli in the lesions can take place very rapidly. A few tubercles in the interarytenoid space may easily contain several milligrams of tubercle bacilli. The destruction in situ of even a portion of these would be equivalent to the injection under the mucous membrane of the larynx of an enormous dose of tuberculin B. E.

At Mount Saint Rose Sanatorium we have in the past six months used heliotherapy alone and combined with other agents in about seventy cases of tuberculous laryngitis, many of which are still under treatment. We hope that after further experience our studies will be of value but at present we do not feel justified in discussing the treatment further than to state that it is one of the most potent remedies at our command in tuberculosis of the larynx. In fact, the potency of concentrated sunlight is so great that it seems not inappropriate to sound a warning as to the unguarded use of heliotherapy without considering the condition of the patient and the clinical course under treatment.

Soon after beginning the use of sunlight it was noticed that either a single prolonged exposure or a series of frequently repeated mild exposures was occasionally followed by a hyperemia, swelling, or even edema, and sense of dryness, discomfort, or even pain in the larynx. These symptoms did not correspond to the treated area but were limited to the lesions and to their immediate vicinity and therefore were not burns. In these cases there were usually constitutional symptoms of increased temperature and pulse, chills, malaise, slight headache, etc. Occasionally an increase of moisture in the pulmonary lesion was noticed. In other words, under certain conditions, the treatment produced all the signs and symptoms of a tuberculin reaction, local, general, and focal. But while the reaction following the injection of a moderate dose of tuberculin is of slight degree and usually disappears in twenty-four to forty-eight hours, the reaction following indeterminate dosage produced by sunlight is naturally variable, both in severity and duration. The following illustrative cases have been selected from among the more striking ones.

CASE 1.—Woman, aged 47, very far advanced. Right Turban III, left Turban I, heart toxic, entire larynx studded with small discrete tuberculomata. Had been five months under treatment with von Ruck's vaccine by Dr. Lawrence Schlenker. Two weeks after beginning daily applications of sunlight to the larynx the reactions to the vaccine became so violent that Dr. Schlenker discontinued the vaccine. Subsequent applications of sunlight produced mild local reaction. The inference was that the combined effect of the vaccine and the sunlight produced too strong a reaction. The larynx improved greatly under treatment.

CASE 2.—Male, aged 39, two years standing, right lung Turban I, left Turban I. Very little activity in either one. Entire larynx and epiglottis infiltrated and thickened to several times the normal size, with extensive ulceration; swallowing almost impossible. All other forms of local treatment were without avail, and rather prolonged exposures to sunlight from 3.5 inch concave mirror were used. The usual anodyn effect of the light alternated with local reaction which resulted in the sloughing of a large part of the epiglottis with mild general reaction. Following this, portions of the larynx began to heal and the patient suffered much less and could swallow with comparative ease. But shortly after, the lesion in the right lung took on an intense activity and the patient died from toxemia two weeks later. In this case we feel that we prolonged the patient's life uselessly, as the treatment which helped the larynx also activated the pulmonary lesion.

CASE 3.—Man, aged 57, with chronic fibroid lesion in upper right lung, very slight activity. The larynx presented a very unusual picture. There was a chronic infiltration and contraction of the arytenoids, interarytenoid fold and cords of five years standing, producing a partial stenosis. In addition, there was a tuberculoma the size of a pea uniting the right arytenoid with the right cord which produced a spasm of the glottis with intense air hunger. Wassermann negative. Operative interference was carefully considered and rejected. Local anesthetics with adrenalin brought about some relief. The patient expressed gratification with the anodyn effect of heliotherapy and daily applications were made. After five days the tuberculoma began to ulcerate and break down painlessly, the patient being more comfortable on account of the lessened asphyxia. Three days later an intense activity appeared in the pulmonary lesion and the patient died in a short time from toxemia and cardiac syncope. In this case the writer was of the opinion that the inevitable death of the patient was hastened by the applications of sunlight to the larynx.

Some of the members of the staff being somewhat skeptical as to the production of such serious reactions by a few minutes use of concentrated sunlight, the writer offered to produce a typical reaction in any patient with sufficient laryngeal involvement whose general condition was such that the ultimate effect of the reaction would be beneficial. The following patient was selected by one of the members of the staff:

CASE 4.—Woman, aged 29, with very slight early changes in the upper portion of both lungs, no râles, and with the entire larynx and epiglottis much thickened and ulcerated, presenting the miliary type of tuberculous laryngitis which has occasionally followed the late epidemic of influenza. Quiescent cervical

adenitis on both sides. The patient had been for ten days practically unchanged in condition. Daily p. m. temperature between 99 and 100. On two successive days exposure of three minutes and four minutes, respectively, were made with a 3.5-inch concave mirror, intervals being allowed to avoid possibility of burning. On the evening of the second day a marked chill was followed by a temperature of 102.4, with increased pain and hyperemia. The cervical glands became much swollen and painful on both sides. The following day moist râles appeared in the upper part of both lungs. This condition persisted three days and gradually subsided in three days. The patient appeared somewhat improved. The reaction was verified and accepted as a tuberculin reaction by the doubting members of the staff. The final result in this case, however, was the same as in all cases of the miliary type of tuberculous laryngitis.

#### CONCLUSIONS

Although heliotherapy and phototherapy are very valuable measures in the treatment of tuberculous laryngitis they are capable, if used unguardedly, of producing tuberculin reactions of indefinite severity and duration and therefore should not be used excepting under the guidance and control of a competent clinician.

Grateful acknowledgment is made of the kind assistance of Dr. L. C. Boisliniere, Medical Director, and of the other members of the staff.

Mount Saint Rose Sanatorium.

#### ADENOID DIPHTHERIA—REPORT OF A CASE

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This case is one that I believe of sufficient interest and rarity to call to the attention of the general practitioner.

On March 12, 1919, H. K., girl, 9 years of age, was brought to me at the behest of her family physician for diagnosis. She presented distinct pallor, great muscular weakness, listlessness, lusterless eyes, a temperature of 97.6, very weak and compressible pulse of 160. Having known the child for some two or three years I was very much impressed with her debilitated appearance.

Her ailment began two days previously when she had been sent home from school by the nurse. Two weeks before that she had had a pneumnia but apparently had completely recovered.

The mother immediately recognized a temperature of 103.5 and the family physician who called close on to midnight was unable to make the proper throat examination, but the following morning noticed that the throat was reddened and the nose somewhat occluded. The patient's mother says that at this time the child had a watery secretion from the nose, and there was

some nausea. The mother also inspected the throat and saw what she describes as strings of mucus in the roof of the mouth.

The following day the child had no fever but some nausea was present. She seemed very much depressed both mentally and physically. She was brought to my office the next day in the condition that I described in the opening paragraph.

Tonsils apparently normal; no strings of mucus to be seen on the ordinary tongue depressor examination of pharynx; larynx apparently normal; the examination of the nose brings out nothing abnormal except that a whitish background can be seen in the posterior nares.

Postnasal examination shows the vault of the nasopharynx to be filled with a yellowish white, thin membrane apparently covering what I make out to be an adenoid growth of immense proportions.

A tentative diagnosis of diphtheritic adenoiditis was made and an effort made to obtain a culture tube for the bacteriological confirmation, but this was unsuccessful. I felt that it was necessary to immediately inject antitoxin, and 10,000 units was given immediately and the child sent home. No other medication was used except a nasal instillation of 0.5 per cent. phenol in aqua mentha piperitae to prevent a possible otitis media. At midnight, just twelve hours after the antitoxin examination, a postnasal examination with the postnasal mirror shows the postnasal space to be absolutely clear of any membrane, although the child had now a temperature of 104, and pulse of 120.

The following morning the temperature was normal and pulse 90. I then reported the case to the health authorities as diphtheritic adenoiditis, notwithstanding a series of negative Klebs-Loeffler cultures from the nasopharynx were obtained while the child was convalescing from the disease at the Isolation Hospital.

Proper stimulation was instituted to forestall a possible heart failure as nasal cases of diphtheria are unusually apt to be followed by this complication, and after a reasonable time had elapsed an adenoid growth the size of a good sized walnut was removed under gas-oxygen anesthesia.

The above case history brings out an important point which I have failed to find noted in the literature, viz., that a case may clear up in its nasal aspect as far as the diphtheria is concerned and the adenoid growth might be the only seat of the infection; a low temperature (97.6) with a rapid pulse (160) shows a toxemia, taken in connection with the physical depression, plus the finding of a membrane in the nasopharynx undoubtedly points to diphtheric infection of the adenoid tissue.



I regret very much that I could not secure a culture tube before I instituted antitoxic and antiseptic treatment as a positive culture of diphtheria would have no doubt been obtained. The clinical results, clearing up the membrane in twelve hours, with a drop in the pulse rate, prove to my mind conclusively we were dealing with a nasal diphtheria in the beginning, which had reinfected the adenoid tissue, as a complication of the nasal condition. The little child has made a complete recovery. We are naturally watching her general condition very closely and trying to prevent a postdiphtheritic condition.

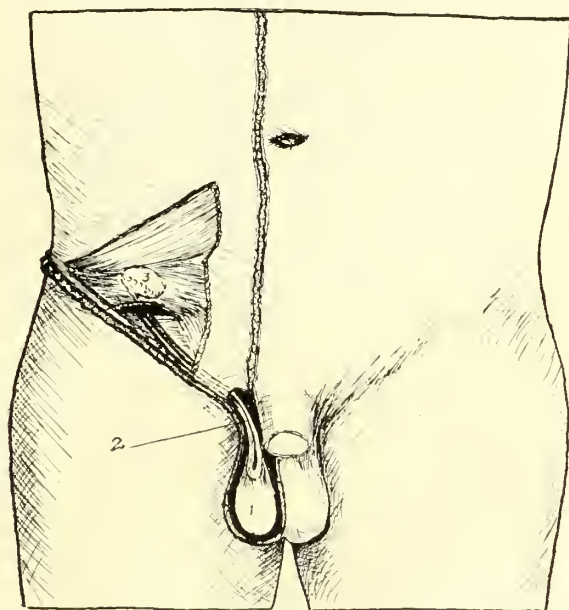
207 Wall Building.

### INTRASCROTAL HYDROCELE OF THE CORD WITH CRYPTORCHIDISM AND HERNIA

#### Report of a Case

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*History.*—The patient stated that he had noticed the hernia all his life, never larger than at present. He did not wear a truss and the hernia gave little trouble, but must be operated on to qualify him for naval service.



1. Hydrocele of the cord. 2. Reduplicated right cord with hernia. 3. Testis in the abdominal cavity.

*Inspection.*—This case was inspected standing and presented an obvious hernial bulge in the right inguinal region. The bulge over the canal was typical, with visible impulse on coughing. Apparently the testicle was in the scrotum on both sides, the left hanging lower and slightly larger than the right.

*Operation.*—Operation disclosed that the seeming testicle on the right side was a hydrocele of the cord hanging down into the scrotum from a loop of cord

in the canal (Fig 1). The cord emerged from the abdomen in the usual way, traversed the canal downward and, making a loop in the very upper part of the scrotum, returned upward through the canal and re-entered the abdomen through the internal ring. At this point the testicle was attached (i. e., just on the abdominal side of the internal ring). There was a fibrous band which limited its excursion in either direction. The hernial sac was of the so-called congenital type and was empty at the time of operation.

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### GASTRIC SYPHILIS WITH THE REPORT OF A CASE

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AND

JAMES I. TYREE, M.D.

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Syphilis of the stomach in the past has been considered a rare disease. Osler, Adami and Fussell in their writings have mentioned it only to speak of its rarity and even today with the Wassermann and roentgenologic findings to confirm the diagnosis, the diagnosis itself is questioned until the therapeutic tests have confirmed it.

Fussell, in his revision of "Tyson's Practice of Medicine," writes of gastric syphilis saying it may give rise to abnormal shapes and perforation of the stomach. Flexner<sup>1</sup> in 1898 speaks of the condition. Articles have also been written by Oberndorfer and Brunner. The most recent papers of note are articles by Maxmillian John Hubeny, Thomas R. Brown and Ernest Garther.<sup>2</sup>

The symptoms may be those of ulcer, cancer or simple digestive disorder. There is complaint of gastric distress, eructations, sometimes vomiting, dependent on the degree of obstruction, diarrhea or constipation. Gastric crises may be present or again the pain of peptic ulcer. There is a history of loss in weight, of a general weakness, nervousness and indisposition. The appetite as a rule is poor, in fact, the patient is afraid to eat. The history is that of malignancy except that in the majority of cases the patient is under cancer age.

Examination reveals the patient to be under weight but not cachectic, the emaciation does not keep pace with the reduction in red blood cells. There may or may not be buccopharyngeal findings, glands palpable. Reflexes are generally changed, tenderness in epigastrium, sometimes palpable masses, dependent on the duration of the gumma. Arteries unchanged, blood pressure not necessarily abnormal. Urine as a rule negative. Feces show mucus, pus and red blood cells. Stomach findings normal

1. Am. Jour. of Med. Sciences, Vol. CXVI, p. 424.  
2. Am. Jour. of Syphilis, April and July, 1919.

or of stagnant contents dependent on whether or not there is pyloric obstruction. There is a marked reduction in red blood cells and hemoglobin, 2,000,000 or less and 50 per cent. The Wassermann as well as spinal fluid tests are in the large percentage of cases positive. Roentgen-ray findings in gastric lues outside of the ulcerative and hyperplastic types are not characteristic. It is only by combining the laboratory tests and therapeutic results with the roentgenologic manifestations that the lesions may be recognized. Malignancy simple peptic ulcer or the deformity due to a former ulcer unless the sclerosis be well marked must be taken into consideration. Generally speaking motility of the stomach is not involved to the same extent as in the other conditions which are up for differentiation.

The case being reported is that of a woman, aged 33, white, married, complaining of a general weakness and diarrhea. Bowels moving nine and ten times daily for the past two years. One child and five miscarriages. Family history negative except for one child who has congenital syphilis. Patient reduced in weight but not cachectic. Eyes normal, no Argyll Robertson pupil. Ears, throat and nose normal. Teeth: marked pyorrhea in lowers; upper plate.



Fig. 1.

Arteries normal. Glands: palpable inguinals, post-cervicals but no epitrochlears. Chest normal, abdomen showed tenderness in epigastrium on pressure and a marked amount of gas throughout. Vaginal examination revealed nothing bearing on the case. Extremities normal, no areas of hyperesthesia. Reflexes normal, slight Rhomberg, blood pressure systolic 120, diastolic 90, pulse 80, temperature 99. Stomach contents showed nothing pathognomonic. Blood: hemoglobin, 55 per cent.; red blood count, 3,000,000; whites, 8,900; Wassermann, 4+. Urine negative, except for few casts. Feces extremely watery, marked amount of mucus, a few red blood cells, no parasites.

Roentgen-ray findings: oesophagus normal, heart shadow normal, evidence of a slight amount of sclerosis in aortic arch. Lungs normal. Fundus of stomach filled readily with spasmodic constriction of middle third of stomach simulating hourglass contraction. There was evidence of a filling defect along greater curvature. Pyloric end of stomach normal, duodenal cap well formed, no evidence of adhesions. Stomach prolapsed lying on pelvic brim, the peristaltic wave was interrupted at site of filling defect. There was hypomotility, stomach requiring five hours to empty itself. Colon showed spastic condition with slight prolapse. Appendix visible. Question as to malignancy, syphilitic gummata or chronic ulcer.



Fig. 2.

#### BASIS OF DIAGNOSIS OF GASTRIC SYPHILIS

1. Patient giving symptoms of malignancy but under cancer age.
2. Cachexia not in keeping with reduced red cell count.
3. Symptoms not painful enough for ordinary peptic ulcer.
4. One child with congenital syphilis, five miscarriages.
5. Positive Wassermann.
6. Blood cells and mucus in feces.
7. Roentgenologic findings, filling defect with absence of adhesions indicative of an organic lesion.
8. Therapeutic test, after six weeks' antisyphilitic treatment patient's bowel movements have been reduced to two daily.

Frisco Building.



# THE JOURNAL

OF THE

## Missouri State Medical Association

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JANUARY, 1920

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### EDITORIALS

#### NEW YORK AS THE MEDICAL CENTER

Of late there has been mention in the medical press in England and also in this country of the possibility of making New York the medical center—the Mecca toward which the graduate in medicine will wend his way in quest of that medical polish which hitherto he acquired in Berlin and in Vienna. The thought, at this time, of conferring this honor on New York is an excellent one and should give us pause. It is the sort of thought that makes for the best expression of Americanism, and, even though nothing comes of it, the mere fact that some one has evolved the idea gives us hope that thereon will be built an argument which will bear fruit. But now that the matter is still in a chrysalis state; now that it is clothed still in its panoply of modesty; now that it has been thrust upon a callous world to live lamely or to die at once, it is meet that something should be written at this time in the hope of keeping the idea healthy and lusty, and also to warn the enthusiasts of the shoals ahead, which, jutting barely above the surface at present because the enthusiasm is not rampant, will be much more formidable directly action is taken for its complete fruition.

That New York has advantages over every other city in the United States cannot be gainsaid, for it is paramount in everything in an educational sense, and only the dullard, who is purblind on account of his obsessing provincialism, would entertain an opposite opinion. But granting that New York holds the palm, educationally speaking, there are a number of lessons New York must learn before her wish to be sought after by medical men will obtain. London and Paris missed out because they were obtuse and wilful, especially Paris, for she had the chance to reap the harvest, but she let things slide just because the Parisians are a combination of extreme worldliness and guilelessness. The Latin makes much of his enthusiasm, is a gracious host, is interested in your enthusiasm for him, is polite and leaves you alone to work

out the sort of life you wish to live in his city. He is always too much of the child, too cheerful and too optimistic to take on himself the sombre rôle of mentor. If you like his city he is delighted; if you hate it you are not educated up to the standard of a just appreciation. He will bow to you and he will converse with you; he will place at your disposal all that is to be found in his various schools, but he will not go out of his way to judge things from an Anglo-Saxon standpoint. It is you who will have to learn the Latin viewpoint; and how is one to acquire that unless one is coached in advance? Very few Americans get into the bowels of the Latin viewpoint, not because they are stupid, but because they do not think it worth while. Had Paris years ago when she had medical students flock to her medical school made a point of taking the lead in shaking off her Latin viewpoint and acquiring some semblance of the Anglo-Saxon viewpoint, her popularity today with medical men would be at its apogee.

Germany, always astute, studied the situation as exemplified in Paris, weighed the pros and cons, labored toward a solution of the problem, and arrived at a goal which to her would result in attracting medical students to her university towns and also to her principal cities. She realized the superiority of Paris as an attractive city over her own cities, but she also realized that attractiveness, while it counted for something, was not the sum total that the medical man wanted. He wanted new horizons; he made a long trip and a rather expensive one in the hope of learning something he could not learn at home; he wanted to acquire knowledge within a limited space of time. Astute Germany, with its sense of internationalism—her intense nationalism was never allowed to obtrude itself on foreigners—decided that the German point of view must be submerged if success were to follow her efforts to attract the medical man; and the linguistic powers, which she had always prosecuted more or less, were put into full force to acquire a speaking knowledge of the English language so that the Anglo-Saxon foreigner would feel at once at home. And when Germany sets out to do a thing in the educational line she generally succeeds according to her desires; therefore it was not long before the wide-awake American, ever eager to gratify his opportunities, turned his eyes toward Germany and directly after packed his grip and sailed for that country. No extraordinary politeness greeted him on his arrival; no childish joy such as he would have found in France, but something better instead: a serious interest to give



him just what he wanted without exacting from him too much labor in the way of learning a foreign language or being compelled to adapt himself to the German viewpoint. In short, he was made to feel at home by the seductions of internationalism and by the serious interest taken in him, if not by the professors, at least by the professors' assistants. Everything was orderly and was quietly done; lectures and clinics were specially arranged for his convenience with men at the head who really knew English; and an interest was taken in his progress that was most flattering to him. He was the victim of internationalism as it had never been expressed before by any country, but though he was the "victim" his profits were undeniable. The German viewpoint had almost vanished, and in its place there were an appreciation of his own country, a desire to help him over the stumbling-blocks, an earnest wish, nicely expressed, and without any insistence, that he would eventually think Germany the greatest country in the world in which to study medicine. The "victim" sometimes learned a deal and sometime he did not. *Quel difference*; he left Germany grateful on account of a pleasant stay among a people who had not flattered him too much; who had not separated him too eagerly from his money; who had not obtruded too greatly their national conceits on him.

To return to New York: Will that city be able to combat the wiles Germany used so cleverly before the Great War and which no doubt she intends to use directly the "feeling" against her subsides? Admitting that our regard for Germany is at its lowest ebb today, is it possible to predict that the American medical man, no matter what his patriotism is today, no matter how truculent his attitude toward Germany is at the present moment, will not be led astray again by the enemy country in the near future? On account of his desire to imitate what others have done, will Germany continue to get the preference, or will he realize, as he should, that the advantages which have been glitteringly described by others were not real advantages, but only a veneer that was easily removed by those who had enough acumen to see how superficial it was? His fault heretofore (or was it his virtue?) was not to expend his money except to the best purpose, but the best purpose was not so much the acquirement of knowledge as to impress his neighbors on his return with his "finished" education, evidenced by outlandish expressions and the names of celebrities that are readily accepted because they have the stamp of unpronounceableness on them that is always a

lure. Paris or London may get a number of medical men, but New York we fear will not be in the running unless her best efforts are put forward to give each medical man who studies in her schools and hospitals some semblance of the European distinction which obtains from foreign travel and foreign education.

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### THE ST. LOUIS CLINICS: THEIR TRUE SIGNIFICANCE

You, as a medical practitioner in St. Louis and necessarily as a native of the State of Missouri, may not have given as much thought to the clinics which are held daily in your city as you should have done. You may have heard of them and you may have said to others in a way that was not fraught with seriousness that you hoped these clinics would attract attention, but the inference gathered from your lukewarm expressions of approval was not the inference that causes the sort of enthusiasm which is provocative of favorable comment elsewhere. Your attitude may be excused on the ground that your comprehension of the great value of these clinics to your city and also to your state has been limited on account of the fact that you have allowed your prejudices to obtain to such an extent that you have looked through a glass darkly and have missed all or nearly all the good and enduring points; or it may be that no one has taken the trouble or time to explain to you the indisputable advantages of these clinics and the infinitesimal disadvantages. And just because we feel that your thought in regard to this matter has not had the guiding hand of a mentor who could take you out of the muddy waters of unclear vision into the clear waters of ready comprehension and high appreciation, we think it our duty to explain the true significance of these clinics, not only in relation to St. Louis, but in relation to the whole state, and also as a means to an end—and a most important end—whereby what is being done in St. Louis at present will solve for each state in the Union by imitation the problem of how best to counteract the tendency of medical men in quest of post-graduate knowledge, which will obtain in the near future, to travel hundreds of miles to New York or thousands of miles to Paris or London.

That new ideas have been paramount for many months in all walks of life is a fact that cannot be contradicted except by those who have been too obtuse to notice the changes in the world's viewpoints, and that these new ideas were bound to occur after the Great War is

merely a repetition of what always occurs after a war of liberation and emancipation. The birth of new and startling ideas followed quickly after the Napoleonic wars ceased, and all Europe, especially England and France, was the better for their birth. The world had got rid of a menace that had clogged the normal flow of thought, that had paralyzed the daily and habitual acts of man. After the incubus that had affrighted mankind into inactivity had been crushed and removed, the normal vocations and avocations of Europeans were resumed, but added to these normal vocations and avocations there was the leaven of new thought, of a keen desire to think along new lines, to shake off all the faults of the past so as not to allow again a loophole through which another tyrant of Napoleonic measurements could enter and again upset the world. Literature and the sciences tore themselves loose from their old and decrepit moorings, and a new lease of life characterized their advances and an enthusiasm of unquenchable proportions incited each branch into the exploring of new fields of endeavor. The new ideas were many and varied; some were extravagant and unworthy of a long life, but out of the cauldron in which they seethed there issued forth enough to change completely the thought of man. And a great and lasting chapter was written, on account of these new ideas, in the history of man.

At present medicine is passing through what might be called a revolutionary phase, due to the new ideas which have come to it now that the world is rid of a greater menace than when Napoleon darkened the horizon. This revolution is not an orgy of extravagance and impracticability, but an erasing of mistakes and a re-writing of what should constitute medical thought from now on. The face of the science of medicine will not undergo any great changes, for the progress toward light has been quick and decisive in the last thirty years, but what is already undergoing a change is the manner of practicing medicine, the concentration of medical thought in our principal cities so that a center can be established in each wherein the advanced student will find "the superiorities of a medical education," which are necessary every now and then to the brightening of his mental faculties as these are brought to bear on the latest and best treatment of cases, whether purely medical or surgical.

That St. Louis is the pioneer in the endeavor to concentrate medical thought in a large city for the benefit of visiting doctors from towns which do not offer clinical material on a large scale, in so far as the clinics are the outgrowth

of medical organization, should be remembered by all her physicians who at present are taking only a lukewarm interest in what is being done. But even if this fact fails to elicit the enthusiastic comment which we would desire, the patriotism of each should be the means of arousing their enthusiastic praise. It is just this patriotism, if prosecuted daily, which will teach those men throughout the city and state who are contemplating trips to other cities or a sojourn abroad, that in St. Louis the clinical material and the clinical instruction should suffice all their needs. Each state should have its medical center so that its physicians need not travel miles and be greatly inconvenienced, not to mention the expense, and when each state evolves its medical center so much the better will it be for that state as an entity in advanced medical instruction. The friendly "rivalry" among the medical centers will result only in advantages, for each center will learn lessons from its rival which will be worth while. Moreover, on account of one medical center having better clinical material or larger hospitals than another, an incentive will be given toward improvement. And when all these medical centers are working toward one end—to give the medical men in their respective states "the superiorities of a medical education," who can deny that the "attractiveness" of each will not suffice to teach the lesson which should be taught today—namely, that a European medical education is no longer necessary?

#### SIXTY-THIRD ANNUAL SESSION

The date of the annual meeting of the Association for 1920 has been set for April 6, which is about six weeks earlier than it has been customary for us to hold the yearly gathering. This earlier date has been made necessary because the American Medical Association will begin its session in New Orleans on April 26 in order to avoid the uncomfortable heat, to which Louisianans may be inured but which might greet visitors unfavorably in the Crescent City if the sessions were held at the usual time in June. The weather conditions in our own state will probably be as agreeable in April as in May and since Jefferson City has always been a popular meeting place and the new capitol completed the members will no doubt be attracted to the meeting in large numbers, therefore the 1920 session should prove the best attended in our history. The beautiful rooms of the house of representatives and the senate chamber are ideally constructed for convention



purposes and the accessibility of the city makes it conveniently reached by a great majority of the members—too convenient in some respects because the frequent train service is a great temptation to leave before the session adjourns.

The program committee plans to increase the number of scientific sessions so that more papers may be read than has been possible in recent years when the House of Delegates occupied the entire time on the first day of the meeting. The committee is considering a return to the former practice of having the delegates and the scientific meeting hold their sessions simultaneously but in separate rooms on the first day, which has been changed from Monday to Tuesday, and continue the scientific work without interruption during the succeeding two days of the meeting. If this plan is followed, the program will be so arranged that the delegates will not be obliged to desert the business body while it is in session.

The committee is anxious to have members submit titles at an early date so the papers can be arranged to the best advantage both of the members and for the success of the meeting, as it requires time and thought to prepare the program after the titles have been received. Those who desire to read papers may write to any member of the committee whose names follow: W. C. Gayler, Wall Building, St. Louis; W. J. Frick, Rialto Building, Kansas City; E. J. Goodwin, 3529 Pine Street, St. Louis.

#### WHO SHOULD CARE FOR THE MENTALLY SICK?

We have been told that in older and cruder times the insane were objects of abuse, except the few who became objects of veneration. We read with horror of the shackles, dungeons, vats of boiling oil, piles of fagots, which were the lot of unhappy sick men, and we congratulate ourselves that those days are long past and that we are wiser and more humane than our ancestors. We all agree, at least in word, that the insane are sick, that their proper care is medical care. We have gone so far as to reprobate the ancient word asylum, "place of refuge," declaring that we will be satisfied with nothing less than hospitals, "places of treatment," for patients whose brain sickness, whatever its exact nature, results in disorders of conduct.

Force must sometimes be employed, for some patients are not willing to be deprived of their liberty even by the doctor's order. Perhaps the patient has smallpox and insists on ignoring

the danger of infecting others. Then society insists on quarantine; the health organization sends an inspector with power to shut the offender up in his home or the pest house. Perhaps the patient has persecutory delusions and fails to see himself as a menace to the peace of the community; then we must place him in a hospital for the insane even against his protests.

But we do not accord to the victim of mental disorder the consideration that the one with diphtheria receives, though in but few cases is he nearly so dangerous. Of course if the relatives have money he or she can be taken by them to the state hospital quietly and privately, just as one might be taken to any general hospital for an appendix operation. But perhaps the patient has not money enough or is away from home and friends when affliction comes. The patient may be a mother of young children, but that makes no difference. To the jail she shall go. It will be no crime for her to *stay* insane when once she is in the state hospital, and hospital care will be given her as long as is necessary, but it seems to be a crime to *become* insane, for to the jail she must go. The sheriff treats her as kindly as he can; he is no brute and he means well by her, but he is trained to look after scheming criminals and he probably never in his life had two hours' instruction in nursing. As soon as possible he takes the patient to the hospital; perhaps a woman goes along as attendant but the county court in its discretion may consider that expense unjustifiable. Many women patients are accompanied by the sheriff alone, though the law requires a woman to go with a girl committed to the Industrial Home. The trip may prove long, the patient may have some delusion that leads her to tear or remove her clothing; the sheriff does the best he can for her.

Perhaps this woman has the rather common idea that she had committed a great sin. When she finds herself lodged several hours in jail and transported in custody of an officer of the law her idea gets well fixed and for weeks or months she holds these occurrences to be evidence of her unworthiness. Perhaps she realizes that she needs treatment and would have gone willingly to the hospital with somebody in order to seek admission, but a voluntary patient must be turned away. If she had disease of the meninges some hospital would accept her on her own request without regard to her social station or financial resources, but since the disease is in the cortex the patient must be committed.



Two simple measures would relieve this condition of affairs, which does our state little credit. The first would be a statute legalizing voluntary admission to the state hospitals. Indeed, why are they so jealously closed though the state built and equipped them? The second measure would be a clause placing on the health officer responsibility for the care of the insane pending commitment. He should be authorized to procure suitable and comfortable quarters and the services of a proper attendant for so long as the patient is detained and for the journey. Perhaps he will spend a few dollars more than maintenance in the jail would cost, but the money could scarcely be better spent. The affliction most dreaded by the public is "losing one's mind." Should we not alleviate the lot of those who already suffer with mental disorder and so far as possible take away the terror that surrounds it by assuring the mentally ailing of medical care from the very moment when public relief is asked by the patient or his friends?

#### THE MEDICAL GARBAGE CAN

That branch of unrecognized medicine (?), "chiropractics," which has found ready acceptance with all those people of superficial thought and of a mental make-up that is vacuous enough to welcome anything that does not pertain to what is found in the beaten path, and is moved to enthusiasm by drugless treatment in any form, received a decided setback in the recent exposure of the "friendly acts" of Representative Frank Delehanty on behalf of the Chiropractors' Association in their attempt to pass the chiropractors' bill in last winter's legislative session of the Ohio State Legislature. Delehanty pleaded guilty in the Franklin County Criminal Court to charges of alleged bribery, but because no money had been passed the court gave him a suspended sentence in the Ohio State Penitentiary.

The thought aroused by the foregoing incident, which resulted not only in the sentence of the culprit, but also in his resignation as a member of the legislature, and also in bringing into the light the "machinations" of Russell H. Skeels of Delaware, Ohio, lobbyist for the Chiropractors' Association, who had been approached by Delehanty to offer a bribe of \$2,000 to Senator Howell Wright of Cleveland to induce Wright to withdraw his opposition to a nonmedical practice bill, besides soliciting \$500 for himself, is the thought all clean-minded medical men have had since legislators have tampered with bills

to further the interests of the various offshoots from what might be called the garbage can of recognized medicine. That some legislators are human, perhaps at times too human, and have the weakness of being easily led astray by the lure of money, should not be a matter for consternation, since other men, men of a supposedly high sense of honor, have the same weakness, although, due to a rather primitive idea on the part of the simple-minded and inexperienced, a legislator's reputation should be and is always like that of Caesar's wife—above reproach. But granting that some legislators exhibit a decidedly human weakness opposite money and are not always strong enough to remember the criminality of acts which invite condemnation, the factor which we greatly deplore is their lack of discrimination in soliciting or receiving money from organizations and associations which if recognized by act of legislature would do untold harm to the community. The act of soliciting money or receiving money as a bribe from any organization or association, no matter how respectable it is or of what untold benefit its recognition would be to the public at large, is an unlawful act and should be punished; but when added thereto is the fact that the guilty legislator is placing himself on sale to do something detrimental to the community, his guilt is two-fold if not three-fold, and no extenuating circumstances can possibly whitewash his criminality.

In recent times, to be exact, in 1917, both in the Missouri House of Representatives and in the Senate, a chiropractic bill was introduced which was engrossed in the Senate, but did not come to a final vote. In the House it failed of engrossment, and a motion to reconsider the vote by which it failed was offered by Representative William J. McPherson of St. Louis. The bill was introduced in the House by Representative Shannon of Audrain County and in the Senate by Senator Brogan of St. Louis. In the wake of this bill, as was to be expected, there appeared criminations and recriminations as regards the interchange of money, and quite a number of people had their reputation more or less besmirched. No drastic measures such as have obtained in Ohio were instituted, but even so, what with the experience of the legislators who fathered the bill in Missouri and the gossip which followed, and on top of all this the occurrences in Ohio, a lesson should be taught the Missouri legislators as well as all other legislators, that trickery is not for the open day, and that no matter how cleverly it may be hidden, the ineluctable clutch of the law is ever present.

## POSTGRADUATE MEETING OF THE TWENTY-SIXTH DISTRICT

Reports from those who attended the postgraduate meeting of the Twenty-Sixth District at Rolla on November 14 convey the same sort of encouragement for the continuation of these meetings that have followed the effort in other sections of the state. Dr. Breuer, the councilor of the district, says: "The lecturers gave us the very latest ideas and methods that have proved useful in their work." And Dr. Oliver of Richland, secretary of the Pulaski County Medical Society, says: "The meeting was fine; those who failed to attend certainly missed something." At the close of the meeting the visitors were entertained at a midnight supper. The program follows:

"Diseases of the Ductless Glands," illustrated with lantern slides, Dr. William Engelbach, University Club Building, St. Louis.

"Modern Wound Treatment," Dr. J. C. Morfit, University Club Building, St. Louis.

"Mental Hygiene and Neurology," Dr. M. A. Bliss, Humboldt Building, St. Louis.

"Cancer of Head and Face," illustrated with lantern slides, Dr. W. H. Mook, Wall Building, St. Louis.

"Medical Organization," Dr. A. H. Hamel, St. Louis.

"Prostatic Disease," Dr. C. E. Burford, Arcade Building, St. Louis.

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## NOVELTY VS. APATHY

The special meeting of the St. Louis Medical Society on December 16 was in the nature of a tribute on the part of the best exponents of the medical profession to the worth and value of the men who were sent to St. Louis by the government to testify in the government's case against the Monsanto Chemical Company of St. Louis. The large attendance and the interest manifested in all the addresses which were made, were indicative of the high regard in which the visiting doctors are held by their confrères in St. Louis. Of special interest were the "talks" by Drs. Victor C. Vaughan, S. Solis-Cohen, Haven Emerson and A. J. Carlson, though in calling attention to their addresses it must not be inferred that what was said by Drs. Hugh McGuigan, Rollin T. Woodyatt, Carl L. Alsberg and others was of lesser importance.

The meeting was so unusual as regards the number of distinguished scientists and the intensive work they are at present doing to ameliorate the inroads of disease and consequently to improve the physical welfare of the people of

the United States, that it evokes the thought of how very advantageous it would be for the St. Louis Medical Society to formulate a plan in the near future so that it would be possible, at least several times during the year, to have a small number of men of national reputation to address the society, not on subjects which have already been exploited by others but on matters to which at the moment their interest is specially directed. Of course no man, no matter how secure his reputation, wants to commit himself before a body of men before he is ready to present a subject worked out in all its details and to his own satisfaction: at times his innate modesty prevents him from "exposing" himself before surety is written large over his experiments, or his observations and experiences; and at other times his selfishness—a normal attribute in all of us and in the matter of original work not to be decried—dictates to him how careful he must be lest another steal his thunder, especially when the thunder is not loud and reverberating but is in its first, somewhat gentle stage. Brushing these reasons aside and granting their reasonableness, there are enough instances of medical men working along scientific lines where the "giving out" to a body of men of their forevisionings or of their work beyond the experimental stage would do much to make the members of a local society think along new lines and arouse within them a deeper thought on the subject so that their mental horizons would be greatly widened. Nothing gives so much zest to the meeting of a medical society as novelty, when novelty is clothed in the garments of science and not in fustian; and the incentive in every instance to arouse in the breast of every member a renewed interest in his society is always produced when a man "from the outside" honors his society with a talk that has the "meat" for which he has longed for months, but on account of his apathy he has been inarticulate to put into speech.

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## OPINION AND CRITICISM

### HOW DOES THIS APPEAL TO YOU?

How to live on 11 cents a day and be happy and content and think well of Providence and one's neighbors is the latest effort of Dr. Harvey W. Wiley, former chief chemist of the United States Department of Agriculture, to cut down the high cost of living and smilingly accept the present extraordinary conditions. We have recently read again those inspiring books "How to Be Happy Though Married" and "How to



Live on Twenty-Four Hours a Day," and have gleaned many lessons from both books; but even though the authors touch on many subjects they graciously refrain from inducing happiness in mankind by advocating the eating of cornmeal mush and making the plea that eating is an industry which has few skilled laborers. With most people if not with all eating is a necessity, and variety if not too great is gustatory and improves digestion. Cornmeal mush as an exclusive diet whereby one can live may be in the interests of the prolongation of life, but it is not in the interests of things which conduce to content and to that evenness of temper which makes each and every person a desirable asset in our social comity. The matter of the prolongation of life has had many students, the greatest perhaps being Metchnikoff. But despite his earnest wish to improve our mundane ways in the hope that our years would be beyond the biblical three-score-and-ten, he died at a comparatively early age; and though statistics are lacking as to how many additional years were added to the lives of his ardent disciples, we are quite sure that his scheme was not the huge success it was thought to be at the outset.

The fascinations inherent in the problem of how to prolong life are many and of a variety that is dazzling, and so great is the lure to advance a new theory that it is a very arid month indeed when we do not read of a new discovery. Cornmeal mush, Dr. Wiley's prescription, may be all right for those individuals who can detach themselves from their environment and their heredity and attempt to live contentedly despite the teachings of physiology. There will always be heroes in this imperfect world but sometimes the heroes do not measure up with those of a former generation. We fear the "cornmeal mushers" would not be giants of strength and would not be giants of intellect. They may have their names written large as powerful instruments in the matter of reducing the high cost of living as it concerned themselves, but as it concerned those who desired to live normally their names we fear will go down in history with those who have always borne the stigma of being the men minus.

#### A NEW HOSPITAL

The matter of a new hospital under contemplation should give us pause. Hospitals are necessary to every community because of the growing tendency today to send patients there who formerly were treated at home. The more modern a hospital the greater are its advantages to the community. Hence it is with considerable interest mixed with civic pride that we wish to

chronicle the advances which have been made to erect a new Jewish Hospital in St. Louis, the old quarters being inadequate for the present needs. Already \$750,000 have been subscribed, and when it is recalled that this amount was forthcoming without any solicitation but was the honest and spontaneous expression of a small number of men who had the interests of a new Jewish Hospital at heart, it can be said in all truth that the end of having an institution in St. Louis that will be an asset to our other modern hospitals is very near at hand. Besides the amount already subscribed the committee in charge of subscriptions hopes to raise an additional \$500,000, which no doubt will be used as an endowment. A foregone conclusion, based on the sympathetic and kindly attitude of the few gentlemen who have shown in no mistakable way their enthusiasm for a new hospital, and the wider interest already aroused among those who will not withhold their material support, is that in a short space of time St. Louis will have another hospital which for modernity, as expressed in architecture and equipment, will give a decided fillip to our civic pride.

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#### FOUNDER OF THE RED CROSS

That the present age is a disillusioning one is a fact beyond dispute. Some months ago we read the true story of Florence Nightingale in Lytton Strachey's "Early Victorians," and "The Lady of the Lamp," as Longfellow called her, was shown to have been an exceedingly irascible person at times with exhibitions of temper and possessed of a sharp tongue. That Florence Nightingale succeeded in her monumental work as well as she did was not at all due to her winning ways, her blandishments or her amiable and ingratiating way of wheedling promises from belligerent opponents in the government service, but to her indomitable will, her invincible courage, and her unremitting and acrimonious attacks on those who stood in her way as obstacles to her achievements. Today we no longer think of Florence Nightingale as the gentle and sweet-souled "Lady of the Lamp," but as a redoubtable fighter whose pen and tongue knew no limitations and whose temper at times was the means of inviting the enmity of some of the most honored statesmen in office. Another disillusionment has recently come to us in Alexis Francois's "Berceau de la Croix Rouge" (The Origin of the Red Cross). The author is a professor in the faculty of literature and social science at the University of Geneva, hence his book has the stamp of authority. In this book we read that the founder of the



Red Cross, Henri Dunant, was not the self-sacrificing person we had been given to understand he was from his own book, "Souvenir de Solferino," and from other writings, especially from the novel "Between Two Thieves," by Richard Dehan, which pictured him in glowing colors under the thin guise of Henri Dunoisse. According to Professor Francois, the founder of the Red Cross was disloyal to his fellow-workers, plagiarized them, was inaccurate if not intentionally mendacious in his correspondence. He was a trickster and had the audacity of a trickster. He wanted notoriety either to further his financial enterprises or to satisfy his personal vanity. Notoriety of any kind was welcome to him so that he would be regarded as a great philanthropist.

Thus it will be seen that another idol has been toppled over, to lie in the dust from now on, though in our drastic criticism of the man it must not be forgotten that only too often good comes out of evil, for Dunant gave birth to the idea of the Red Cross despite his meannesses and his ignoble qualities of head and heart.

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#### END OF THE ST. LOUIS REPUBLIC

The absorption of the *St. Louis Republic* by the *Globe-Democrat* is of interest and moment since the transfer means the extinction of the only Democratic morning paper St. Louis had. To a large number of readers the *Republic* was a most welcome newspaper: it brought to them daily well-written editorials from their political standpoint. But it did more than this: it specialized in local news and in this respect it made much of matters of interest to the citizens of St. Louis. This is always an excellent attribute in journalism, for without it civic pride is allowed to languish and die. Again, though the *Republic* had its ups and downs during its long career as one of the leading papers of St. Louis, the even tenor of its way was not disturbed and the care and precision of its editorial conduct throughout all its pages was above criticism. True, it was a bit old-fashioned if old-fashionedness means a dislike of sensationalism and a clinging to the best ideals in journalism. And on account of these qualities the passing of this paper is to be regretted. But though dead as a newspaper we are sure that its kindly and beneficial influences will not be neglected by its new "protector" and that the editorial acumen of this new "protector" will utilize the good and wholesome lessons as they were illustrated daily in its columns. Necessarily from now on the *Globe-Democrat* will exercise an influence in St. Louis and throughout the state

which will enhance its former prestige, great though it was, and that this influence will always be thrown on the side of justice and of right against might is a foregone conclusion, remembering as we do the past policy of the paper. A new *Globe-Democrat* will arise, serving the needs of both the Republican and Democratic parties, with a vision clarified and penetrating so that only the best in each party will be appreciated and praised; a newspaper of views so broad that all the littlenesses incident to party feeling will be shunned and all the rancor and jealousy which feed criminations and recriminations will be crushed. A novel situation this, of one paper representing both political parties, serving at least their ideals if not the working out of their ambitions as regards office; and even though what we have written will never mature as we have pictured it, is it not a step in the right direction, now that the time has come after the great war when the change of thought which is dominating the world is for the bringing together of nations in the hope of a complete understanding of each other? And if nations, why not political parties, at least as represented in unprejudiced newspapers?

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#### BOOKS FOR LEISURE MOMENTS

*Reading with discrimination broadens the mind  
and strengthens the mental grasp*

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"WHAT BILLINGSGATE THOUGHT," by Dr. W. A. Newman Dorland (The Stratford Company, Boston), consists of letters from a father to his son and indicates throughout the solicitude of a father as to the attitude his son should take opposite all the questions of the day. That the advice is good cannot be gainsaid and that it is given in a gracious manner adds a charm to the pages and convinces the reader at once that the son, if he was of the right metal, profited greatly by his father's kindness of thought, his erudition far removed from pedantry, and his keen desire to impress on a youthful mind very sound philosophy which comes to one only after a number of experiences and after considerable cogitation. A book of this sort reconciles one to life, no matter how checkered it has been, and shows how a mind that has dwelt in a calm atmosphere is capable of meeting rebuffs with no bitterness, with no thought of recrimination. That the tendency today is towards an ever-widening chasm between fathers and sons on account of divergent views and also on account of vocations and avocations which separate instead of causing a closer connection, is a chapter in the social

life of this country which has given pause to a number of students of the ties in families, which are altogether too tenuous to endure; and much has been written on the subject so as to better matters, but unfortunately in a manner that is either a reprimand of the father for neglect of his son or a castigation of the son for allowing himself to be led from the paths of honesty and probity into those which are the opposite. This undesirable feature does not obtain in Dr. Dorland's book, hence its value is beyond dispute whether it is put in the hands of a father or a son. Aside from the tone of the book which breathes only the culture derived from living amongst the best books—living intimately and daily with the thoughts of our greatest writers—and which is a great asset, the fact that the much-abused sexual question is not at all touched upon should prejudice the reader for this book at once. Surely in a book of this sort it would ill fit into the pages; and the author is to be commended for his taste and his discretion in omitting what has now become a thrice-told tale of no effectiveness when sandwiched between the pages of a book otherwise concerned with various questions, but of considerable effectiveness when handled without gloves and in a manner that leaves no doubt in the reader's mind that to cover the subject a whole volume is necessary. The father in Dr. Dorland's book is too old-fashioned to be "tortured" by the sexual problems as they affect the young man today, and for this bit of old-fashionedness we ought to be grateful. P. S.

This is the age when advice is given to others as it has never been given before; when the writer on sociological subjects and near-medical subjects takes others in hand, sometimes roughly and sometimes gently, and tells them just what they ought to do to be assets from a social standpoint, or healthy men and women, so that they can fulfill their obligations to society; when this sort of interference is welcomed quite enthusiastically by nearly all readers because of their keen desire to be instructed. Hence innumerable books on how one should live and what ailments can be avoided, and how one can by following certain precepts acquire a mental poise that will be instrumental in leading to happiness and a complete rounding-out of life. That there are some books on these subjects which should never have been written goes without saying, but even restricting the number to rather small proportions and using a critical eye to root out what is pinchbeck, there remain a goodly array of well-written books which do not go so deeply into medicine that they are beyond

the comprehension of the laity and yet have enough of the touch of medicine in them to make them instructive to the people at large and of some value even to the medical man by illustrating to him the possibility of writing along popular lines, which the scientific bend of his own mind would preclude. Such a book is "The Health of the Teacher," by Dr. William Estabrook Chancellor of the College of Wooster (Forbes and Co., Chicago). The defects of Dr. Chancellor's book are inherent in every book written in a popular manner on near-medical subjects, but these are outweighed by some decidedly worthy chapters which are characterized by common sense and an earnestness of thought and simplicity of expression which bespeak for the author the sort of mental equipment which, when put to the test, can be equal to the task it undertakes to expound. Especially interesting in this book are the chapters on "Exercise" and "Diet" and in both we find considerable food for thought. No overstating of matters is to be found in either of these chapters; only common sense and a sane attitude. Of course in a book of this sort the latest phases in medicine receive mention and of course now that the thyroid has come to the front in medicine it is meet that it should receive some attention. The author's characterization of this organ as the "errant thyroid" is not an unhappy one, for its "errancy" is well known to all medical men.

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## NEWS NOTES

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PERRYVILLE lost eight citizens in one week during a recent typhoid epidemic.

THE Jackson County Medical Society has increased the amount of annual dues from \$6 to \$12.

THE state board of health will hold a meeting at the Jefferson Hotel, St. Louis, January 12, 13, 14 for the purpose of examining applicants for license to practice.

DR. WILLARD BARTLETT of St. Louis was elected president of the Southern Surgical Association at the annual meeting held in New Orleans, December 16-18.

DR. W. W. HOYT, formerly of Chicago, has recently located in St. Louis where he will devote attention to orthopedic surgery. He has been appointed associate professor of orthopedic surgery at the St. Louis University Medical School.



DR. W. D. HAMMOND formerly of St. Louis where he served on the staff of the Barnard Free Skin and Cancer Hospital and later became associated with Dr. L. Duncan Bulkley of New York, has returned to St. Louis and will give his attention exclusively to diseases of the skin.

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FOR soliciting patronage through agents, which is a violation of the medical practice act, the state board of health suspended the license of Dr. Oscar A. Young of Excelsior Springs for a period of one year from Nov. 10, 1919. He appealed to the circuit court of Clay County and Judge Hughes sustained the action of the board.

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WHEN Dr. Jefferson Davis Griffith of Kansas City rounds out a half century of active practice next March, the Jackson County Medical Society will celebrate the event by tendering a banquet to him. The society has already appointed a committee to make adequate arrangements for honoring Dr. Griffith on March 4.

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THE coal famine of last month was responsible for the postponement of the postgraduate meetings at Mexico and Chillicothe. All arrangements had been made and an excellent program had been prepared for each meeting but the shortage of coal and the disarranged train schedules made it impractical to hold the meetings. The councilors of the districts expect to keep the programs as prepared until a more propitious time.

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DR. FREDERICK EBERSON, formerly research bacteriologist in charge of the laboratories of the North Manchurian Plague Service at Harbin, China, and until recently of the Rockefeller Institute for Medical Research, has been appointed associate in dermatology at the Washington University Medical School in charge of the laboratory for syphilis research under a United States government grant for the study of "The Latent Syphilitic as a Carrier."

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DR. J. F. BREDECK, representing the National Tuberculosis Society has been employed by the city of St. Louis to make a survey of the city to ascertain the condition of tuberculous persons and offer recommendations for improved methods of their care. The expense of conducting the survey will be borne by the St. Louis Tuber-

culosis Society from a fund that has been raised for the purpose, but Dr. Bredeck will conduct his investigation under the supervision of the Department of Public Welfare.

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DR. OWEN KRUEGER left Kansas City for New York November 21 and will sail November 26 for overseas work as head of the surgical service in the American Red Cross Hospital at Riga or Warsaw. Dr. Krueger graduated from the Kansas City Medical College in 1890 and has been a member of the Jackson County Medical Society and a fellow of the American Medical Association for many years. He was recently honorably discharged from the Medical Corps of the Army with the rank of captain.

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ST. LOUIS has been made the general headquarters for the firm of W. G. Cleveland Drug and Surgical Company of Omaha and St. Louis. The success of the St. Louis branch has been so pronounced and the increase of their business so large that the company decided to move their headquarters from Omaha to the greater city. With the establishment of their principal office in Missouri their stock of surgical instruments, hospital supplies, roentgen-ray apparatus, electrical equipment and all other accessories for the complete outfitting of physicians and hospitals will be increased to meet the greater demands that will undoubtedly follow.

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DR. ROBERT MUELLER of St. Louis, Lieutenant in the Medical Corps of the Navy, has been awarded the Navy Cross for distinguished service. While acting as battalion surgeon of the Second Battalion, Sixth Regiment, U. S. Marines during the Meuse-Argonne offensive Nov. 1 to 11, 1918, Lieut. Mueller advanced with the leading elements of his battalion, often especially exposed to machine-gun fire and bar-rages laid down by the enemy. On the first day of the attack he displayed extraordinary heroism on several occasions by entering areas under heavy bombardment to go personally to the aid of the wounded. During the entire period he displayed the greatest skill, judgment and courage, often far beyond the call of duty, in the care and evacuation of the wounded.

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THE National Research Council has formed a special committee on food and nutrition problems, composed of a group of eminent physiological chemists and nutrition experts. This committee will attempt to solve important prob-



lems connected with the nutritional values of food and the most effective grouping and preparation of foods, both for human and animal use. Special attention will be given to national food conditions. As soon as funds are available the committee will begin investigating the comparative food values of meat and milk and of the conditions of production of these foods, together with the whole problem of animal nutrition; the food conditions in hospitals, asylums, and similar institutions; the nutritional standards of infancy and adolescence; the formation of a national institute of nutrition, and other problems of nationally important character.

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FROM the beginning of the St. Louis Clinics the responses to advertisements in the various medical journals have shown a widespread demand for special courses and postgraduate instruction. The inability to meet this demand has been felt keenly by the board of directors of the clinics yet the demand was so persistent and came from such large territory that it could not be ignored. Consequently, a meeting of the administrative board of the St. Louis University Medical School and the executive faculty of the Washington University Medical School was held with the board of directors of the clinics and this condition was placed before them for consideration. The executive faculty and the administrative board of the respective schools recognized the necessity for some action in this matter and entered into a consideration of its solution with great enthusiasm. From the plans now under way the directors of the St. Louis Clinics hope that early in 1920 they can furnish definite schedules to registrants inquiring for the courses.

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WITH the completion of Volume XVI in December, 1919, our JOURNAL closed a satisfactory year notwithstanding the very disturbed conditions in the advertising field and the large increase in the cost of publishing all periodicals. The price of paper, printing materials and labor has advanced more than 100 per cent. over the cost of these items in 1915. The cost of the paper would have been considerably higher if we had not been the beneficiaries of the courtesy of the American Medical Association, which has been printing our JOURNAL for several years, because we have profited from the low price to them made possible by the purchase of large quantities of paper stock for the Association's publications which includes the stock used in our JOURNAL. In addition to this material saving we have benefited by having our JOURNAL appear in uniform style and make up, a thing

not to be despised when it is known that some publications were forced to suspend on account of the paper shortage—one newspaper it is said having been issued with its news printed on rough wrapping paper. In the advertising department our JOURNAL has also been able to weather the stormy period of the world war. For a short period several patrons reduced the amount of space used but most of them have continued their regular quota and we have several new announcements in this issue from firms entirely worthy of your support. In addition to the new advertisements mentioned below the Abbott Laboratories has increased its space from one-half to a full page in order to bring to your attention the large number of approved articles that issue from this popular house. The new firms are: Bauer and Black, Blumberg Biological Laboratories, Hollister-Wilson Laboratories, Hygeia Hospital, Marshalltown Laboratories. This is an encouraging outlook for the business end of the JOURNAL but we would also call the attention of our readers to the new departments in the reading pages entitled Opinion and Criticism and Books for Leisure Moments. In those columns we shall endeavor to mention topics of interest to physicians on subjects related to medicine but not strictly of a scientific nature. And do not forget Strikes and Putts. If you have any items suitable for that column send them in.

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## MEMBERSHIP CHANGES, DECEMBER

### NEW MEMBERS

- Abrams, Samuel F., Wall Bldg., St. Louis.  
Altringer, A. N., 1100 Rialto Bldg., Kansas City.  
Bosserman, David G., 5755 Easton Ave., St. Louis.  
Bradley, John Martin, 4068 Washington Ave., St. Louis.  
Bram, John C., 2945 Franklin Ave., St. Louis.  
Brashear, Howard C., City Hospital, St. Louis.  
Bredeck, Joseph F., 836 University Club Bldg., St. Louis.  
Carr, George M., Marquand.  
Davis, Phillips N., 7370 Manchester Ave., St. Louis.  
Dean, James R., City Hospital, St. Louis.  
Deweese, Everett R., 1020 Rialto Bldg., Kansas City.  
Dixon, Elliott K., Wall Bldg., St. Louis.  
Earnest, Clarence E., Hyde Park Bldg., Kansas City.  
Frank, Adolph M., 727 Metropolitan Bldg., St. Louis.

Franke, Florent E., City Hospital, St. Louis.  
Harrison, E. Lee, 1819 E 35th St., Kansas City.

Hughart, Harold H., City Hospital, St. Louis.  
Hurwitt, Frank, 201 Argyle Bldg., Kansas City.

Johnson, A. N., 532 Reserve Bank Bldg., Kansas City.

Kinsella, Ralph A., Lister Bldg., St. Louis.

Kyner, Thomas Arthur, 214 Wirthman Bldg., Kansas City.

Lehman, Edwin P., Barnes Hospital, St. Louis.

Mathias, Edward Lynch, 910 Sharp Bldg., Kansas City.

Miller, Abram, 1422 Central Ave., Kansas City.

Munro, Edward E. H., City Hospital, St. Louis.

Myers, George M., 723 University Club Bldg., St. Louis.

Pelz, Mort D., Jewish Hospital, St. Louis.

Smit, William M., University Club Bldg., St. Louis.

Strauss, Arthur E., 612 Humboldt Bldg., St. Louis.

Tate, Llyod L., Century Bldg., St. Louis.

Tesson, James A., 907 Rialto Bldg., Kansas City.

Toomey, Noxon, Lister Bldg., St. Louis.

Townsend, Vincent F., Maplewood.

Van Meter, Eugene R., University Club Bldg., St. Louis.

#### CHANGES OF ADDRESS

Albright, F. C., Bronaugh to Garland, Kan.  
Bailey, Fred W., 816 University Club Bldg., St. Louis, to 611 Metropolitan Bldg.

Bechtold, Edmond, 108 E. Washington St., Belleville, Ill., to First National Bank Bldg.

Biewend, 3319 Magnolia Ave., St. Louis, to 620 Century Bldg.

Birney, W. P., Center, to 522 Broadway, Hannibal.

Boemer, I. H., 816 University Club Bldg., St. Louis, to 611 Metropolitan Bldg.

Bowers, Joseph, Granby to Red Fork, Okla.  
Breed, M. E., 944 Hamilton Ave., St. Louis, to 5870 Enright Ave.

Byler, W. F., 3225 Troost Ave., Kansas City, to 2608 E. 31st St.

Clancy J. F., 3135a Cherokee St., St. Louis, to 3504 Haliday Ave.

Craven, J. H., Sarcoxie to Carl Junction.

Deatherage, William N., Hoberg to Galena.

Drake, J. Carl, Fifth Regiment Medical Dept., Nevada, to 929 N. Sarah St., St. Louis.

Edwards, E. D., 4216 Shaw Ave., St. Louis, to U. S. Public Health Service, Palo Alto, Calif.

Eyerman, Charles H., Sullivan to University Club Bldg., St. Louis.

Glaser, Martin J., 2750 Russell Ave., St. Louis, to 430 Third National Bank Bldg.

Gorham, Frank D., 306 Humboldt Bldg., St. Louis, to 405 Humboldt Bldg.

Gray, I. S., 6175 Washington Ave., St. Louis, to Mallinckrodt Chemical Works, 3600 N. Second St.

Green, J. R., Independence to 816 Rialto Bldg., Kansas City.

Greeson, George A., Windsor to Calhoun.

Hecker, Charles H., 1924 St. Louis Ave., St. Louis, to U. S. Army General Hospital 28, Fort Sheridan, Ill.

Hein, E. E., City Hospital, St. Louis, to Grand and Arsenal.

Heryford, J. R., Seward, Neb., to Maryville, Mo.

Hochdoerfer, Daniel F., 3055a Arsenal St., St. Louis, to 3858a Arsenal St.

Hoxie, G. H., 1316 Rialto Bldg., Kansas City, to 715 Bryant Bldg.

Hughes, M. R., 3546 Washington Ave., St. Louis, to 232 Metropolitan Bldg.

Jennings, J. Ellis, 508 Carleton Bldg., St. Louis, to 807 Carleton Bldg.

Kelly, C. A., 3910 Folsom Ave., St. Louis, to 3900 Folsom Ave.

Kelly, Joseph P., 612 Sharpe Bldg., Kansas City, to 1110 Harrison.

Kennedy, A. F., 5807 Plymouth Ave., St. Louis, to 807 Carleton Bldg.

Klippel, B. W., 4012a Shenandoah Ave., St. Louis, to 2500 S. 12th St.

Koenig, George W., 740 S. Fourth St., St. Louis, to 958 Arcade Bldg.

Larew, John T., University Club Bldg., St. Louis, to 5095 Cates Ave.

Lewald, James, 3129a Wyoming St., St. Louis, to 3109 Bent Ave.

Lippe, Meyer J., 5349 Maple Ave., St. Louis, to 606 Carleton Bldg.

Luten, Drew, Barnes Hospital, St. Louis, to 721 University Club Bldg.

Lynch, T. J., Eighth and Felix, St. Joseph, to Okmulgee Clinic, Okmulgee, Okla.

McCarthy, Eugene F., 3805 Westminster Pl., St. Louis, to Wall Bldg.

McFadden, James F., 1800 S. Compton Ave., St. Louis, to 304 Humboldt Bldg.

Marder, J. Lee, Ashland and Vandeventer, St. Louis, to 405 University Club Bldg.

Matlock, L. J., Caruth to Kennett.

Maxey, S. W., 225 W. Eighth St., Pueblo, Colo., to 310 W. Eighth St.

Miller, John J., S. E. corner Taylor and Suburban Ry., St. Louis, to 4439 Enright Ave.

Parker, W. J., Berryman to Steelville.

Pell, Teresa, 619 University Club Bldg., St. Louis, to 806 Walnut St., Carbondale, Ill.

Perrings, Fred S., 3458 Connecticut St., St. Louis, to 6818 Michigan Ave.

Pulliam, M. J., Metropolitan Bldg., St. Louis, to 3933 S. Broadway.

Rose, Dalton K., Barnes Hospital, St. Louis, to 721 University Club Bldg.

Rotter, Julius Charles, 3249 Jefferson St., St. Louis, to 3249 S. Jefferson Ave.

Schlicht, William F., Niangua to Nevada.

Schmid, Otto A., 1404 Charles St., St. Joseph, to Bartlett Trust Bldg.

Scholz, S. B., Jr., 1501 Locust St., St. Louis, to 500 Maine St., Springfield, Mass.

Shroat, Loren G., White Sulphur Springs, Mont., to 202 Securities Bldg., Seattle, Wash.

Simon, Frederick C., 816 Frisco Bldg., St. Louis, to 912 Arcade Bldg.

Smith, Capt. A. S. J., Camp Pike, Little Rock, Ark., to 710½ Felix St., St. Joseph, Mo.

Sophian, Abraham, 404 Argyle Bldg., Kansas City, to 3520 Main.

Stewart, J. Edgar, 7 Aberdeen Place, St. Louis, to 819 University Club Bldg.

Stevens, H. H., 224 Metropolitan Bldg., St. Louis, to Harriet S. Cory, 543 Rosedale Ave.

Stockwell, Benjamin E., 2345 S. Broadway, St. Louis, to 2229 S. Broadway.

Stokes, James B., 1729 Missouri Ave., St. Louis, to Keytesville.

Teachenor, F. R., 3230 Woodland Ave., Kansas City, to 425 Argyle Bldg.

Trigg, Joseph M., 516 Metropolitan Bldg., St. Louis, to 433 Metropolitan Bldg.

Trowbridge, E. H., 1111 Rialto Bldg., Kansas City, to 209 Scarrit Arcade.

Van Cleve, Lieut. J. D., Base Hospital, Camp Pike, Ark., to Malden, Mo.

Van Raalte, Martin, 214 Railway Exchange Bldg., St. Louis, to 925 Arcade Bldg.

Wilson, Dora Greene, 1028 National Life Bldg., Chicago, Ill., to 505 Fifth Ave., New York.

#### TRANSFERRED

Avery, Walter J., Fresno, Calif., from St. Louis Medical Society to Fresno County (Calif.) Medical Society.

Garstang, D. Buie, Los Angeles, Calif., from St. Louis Medical Society to Los Angeles County (Calif.) Medical Society.

Kempff, L. A., St. Louis, from St. Louis Medical Society to Los Angeles County (Calif.) Medical Society.

Redington, J. C., Galesburg, Ill., from St. Louis Medical Society to Knox County (Ill.) Medical Society.

Smallhorst (formerly Schmalhorst), David E., El Paso, Texas, from St. Louis Medical Society to El Paso County (Texas) Medical Society.

Washington, Lancaster G., Tulsa, Okla., from St. Louis Medical Society to Oklahoma Medical Society.

#### DROPPED

Abramopoulos, C., 921 Phelan Bldg., San Francisco, Calif.

Gallagher, Joseph G., Valley Park, St. Louis.

Holt, Alonzo T., Tusculum Rural Station, Tusculum, Tenn.

King, W. R., Fort Morgan, Colo.

O'Connell, John, Pomeroy, Iowa.

Smith, Clarence A., Monte Vista, Colo.

Smith, David E., Cape Girardeau, Mo.

Smith, Leslie L., Urich, Mo.

#### RESIGNED

Fisher, Roland F., Wausau, Wis.

Good, J. W., Fordland

#### DECEASED

Brown, John Young, St. Louis.

Douglas, James T., Ferguson.

Inman, Samuel L., El Paso, Texas.

McCoy, Gurley G., St. Louis.

Mayes, Farquard A., Hayti.

### OBITUARY

#### FARQUARD A. MAYES, M.D.

Dr. F. A. Mayes of Hayti, who practiced medicine in Missouri for over forty-three years, died November 4, aged 71 years. He was a member of the Pemiscot County Medical Society and the Missouri State Medical Association, and was local surgeon of the Cotton Belt Railway for many years.

### MISCELLANY

#### HONORABLY DISCHARGED, MEDICAL CORPS, U. S. ARMY AND NAVY

Albright, F. C., Bronaugh.

Barnett, A. J., Carthage; Beckemeyer, W. A., Sedalia; Billeter, W. J., Bynumville; Bradley, W. C., St. Louis.

Clark, I. R., St. Louis.

Deal, F. E., Slater.

Epstein, J. M., St. Louis.

Frazier, C. E., Kansas City; Fry, W. F., St. Louis. Haggard, D., Nevada; Hardesty, J. W., Hannibal; Haynes, S. E., St. Louis; Hoberecht, C. A., St. Louis; Huffman, J. W., Leadwood.



Ireland, R. D., Kansas City.  
 Kirby, A. C., St. Louis; Kring, E. V., St. Louis;  
 Krueger, O. W., Kansas City.  
 Malley, J. A., Monroe City; McAllaster, B. R.,  
 Carthage; Menefee, B. F., Montgomery City; Menefee,  
 C. D., Perry.  
 Orr, T. G., Kansas City.  
 Pritchett, A. B., St. Louis.  
 Robinson, G. F., Koch.  
 Schaerrer, H., Chamois; Singleton, D. E., Shelby-  
 ville; Summers, W. R., Springfield; Swearingen, J. A.,  
 Wyaconda.  
 Telfer, G. A., St. Louis.  
 Walthall, D. O., Kansas City; Willis, J. B., Park-  
 ville; Winn, J. W., Higbee; Wittwer, H. J., St. Louis.  
 Zachritz, G. F., St. Louis.

### KANSAS CITY SESSION OF THE WESTERN SURGICAL ASSOCIATION

Under the presidency of Dr. Roland Hill of St. Louis the twenty-ninth annual meeting of the Western Surgical Association was held at the Muehlebach Hotel in Kansas City, Dec. 5 and 6, 1919. It was the first meeting since the men have gotten back from the war and was one of the best attended and most enthusiastic that the association has ever had.

The subject of Dr. Hill's presidential address was "Medical Problems Suggested by the War," in which he advocated among other advanced ideas the removal of remedial physical defects from children before they reach the productive age.

A number of visitors, including internists of prominence, were present from Kansas City, St. Louis, and other points in the state. Dr. Thomas S. Cullen, professor of gynecology at Johns Hopkins University, was the guest of the Association and gave a masterly address on the subject of "Adenomyoma." This was widely discussed and seemed to be a revelation to many members who felt that they had overlooked some of these serious cases.

Dr. Charles D. Lockwood of Pasadena, Calif., presented a most interesting contribution on "Artificial Impaction of the Femur in the Aged." This was an entirely new version of the subject and Dr. Lockwood's results were highly instructive. The paper of Dr. Joseph Rilus Eastman of Indianapolis on the "Operative Technic in Spina Bifida" covered this interesting subject in a masterly manner. The discussion was opened by Dr. C. H. Mayo and was continued by a number of the members. The subject of "Diaphragmatic Hernia" was presented by Dr. T. F. Riggs of Pierre, S. D. From the discussion we are led to believe that this condition is of more frequent occurrence than is usually considered. One of the members, Dr. Jepson of Iowa, cited three cases occurring in his own practice that had never been reported. Dr. Charles H. Mayo contributed a most interesting article on "Jaundice and Its Surgical Significance." From his paper it is apparent that the operation of cholecystectomy is favored at the Mayo Clinic over the simple cholecystotomy. Dr. Emil G. Beck of Chicago gave a highly scientific discussion on the "Treatment of Deep-Seated Carcinoma." Dr. Beck's researches on the subject are of the most profound and valuable character. Other papers of special interest were: "Tuberculosis of the Greater Trochanter," by Dr. Malvern B. Clopton of St. Louis; "Posterior Gastroenterostomy Still the Surgical Treatment of Gastroduodenal Ulcer—Ideal Composite

Technic," by Dr. Robert C. Coffey of Portland, Ore.; "Breast Tumor, Benign and Malignant," by Dr. B. B. Davis of Omaha.

Dr. Howard Hill was chairman of the committee of arrangements and contributed much to the enjoyment of the visitors by very excellent management of all details pertaining to the meeting.

The membership of the society was increased from 150 to 175 and fifteen new members were elected at this meeting, two of them being from St. Louis, Dr. William E. Leighton and Dr. Fred W. Bailey; Dr. E. D. Twyman and Dr. F. R. Teachenor of Kansas City.

Dr. Arthur T. Mann of Minneapolis was chosen president; Dr. R. W. Corwin of Pueblo, first vice president; Dr. E. M. Sanders of Nashville, Tenn., second vice president; Dr. Warren A. Dennis of St. Paul was made secretary and treasurer. The next meeting will be held in November, 1920, at Los Angeles, Calif.

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1920

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH  
HAVE PAID THE STATE ASSESSMENT FOR  
ALL THEIR MEMBERS)

Benton County Medical Society, Sept. 13, 1919.

Webster County Medical Society, Dec. 1, 1919.

Madison County Medical Society, Dec. 2, 1919.

### ST. LOUIS MEDICAL SOCIETY

#### Meeting of the Council, October 8

The meeting was called to order at 8:45 p. m. by Dr. Hamel, who was appointed chairman in the absence of Dr. Engelbach. The minutes of the previous meeting and of the special meeting of July 31 were read and approved.

The resignations of Dr. Roland F. Fisher and Dr. Fred T. Murphy were accepted.

Dr. Graves moved that Dr. Murphy's name be referred to the General Society with recommendation that he be elected an honorary member of the society. Seconded and carried.

The membership committee recommended the following applicants for active membership and they were elected: Kenneth Fowler, St. Louis Children's Hospital; Howard H. Heuston, City Hospital; Henry J. Kuhn, 4063 Lindell Boulevard; A. A. Margulis, University Club Building; Wellwood M. Nesbit, University Club Building; Henry G. Pieper, 1911 South Twelfth Street; James B. Stokes, 1729 Missouri Avenue; Ira W. Upshaw, 5015 Shaw Avenue.

Dr. Falk moved that the president and treasurer be empowered to make a loan not to exceed \$500 to pay the current expenses. Seconded and carried.

The secretary stated that 231 members were delinquent, 185 of them having been in service, some not yet discharged.

Dr. Falk moved that members in service who were discharged prior to Oct. 1, 1919, be requested to pay 1919 dues. Seconded and carried. Dr. Smith asked to be recorded as voting against the motion.

**Meeting of November 4, 1919**

The meeting was called to order at 8:30 p. m. by the president, Dr. William Engelbach. The minutes of the previous meeting were read and approved.

Mr. S. J. Harbaugh of the Tax Committee of the Board of Education gave a ten minute talk on the proposed increase in school taxes.

Dr. Edwin Schisler presented an interesting case of transposition cardiosternum.

Dr. Richard Weiss presented an interesting case for diagnosis from Dr. Engman's Clinic at the Washington University Medical School.

The scientific program consisted of the following: "Effects of Radium on Epitheliomata of the Skin," by Dr. John S. Kimbrough.

Discussion by Drs. Martin F. Engman and Joseph Grindon; Dr. Kimbrough closing.

"Mustard Gas Burns with Exhibition of Cases," by Dr. Joseph Grindon.

Discussion by Dr. William H. Mook.

"Camphor Oil Tumors," by Drs. William H. Mook and W. G. Wander.

Discussion by Drs. Theodore P. Brookes, Martin F. Engman, Barney Brooks, Joseph Grindon, Louis C. Boisliniere, Philip C. Scholz, Henrietta A. S. Borck, Albert Habermaas, W. G. Wander and William H. Mook.

"The Treatment of Syphilis at the Washington University Dispensary," by Dr. Adolph H. Conrad.

Dr. Richard S. Weiss gave a lantern slide demonstration.

Dr. Koetter moved that Dr. H. M. Whelpley be appointed a delegate to the revision meeting of the National Pharmacopoeia. Seconded and carried.

Attendance 172.

**Meeting of November 11, 1919**

The meeting was called to order at 8:50 p. m. by the president, Dr. William Engelbach. The minutes of the previous meeting were read and approved.

Dr. Coughlin presented an interesting case of fracture of the lower jaw close to angle, held in place by a wire nail.

Discussion by Dr. George B. Kroeger.

The scientific program consisted of a paper by Dr. Willard Bartlett on "Surgical Treatment of Goiter," illustrated with lantern slides.

Dr. S. F. Wennermann read a paper on "Statistical Studies of Postoperative Thyroidin."

Discussion by Drs. Charles H. Neilson, William T. Coughlin, R. B. H. Gradwohl and Francis L. Reder.

Attendance 155.

**Meeting of November 18, the General Society**

The meeting was called to order at 8:40 p. m. by the president, Dr. William Engelbach.

The scientific program was taken up as follows:

"The Complement Fixation Test of Tuberculosis," by Dr. George Ives.

"The Clinical Value of the Complement Fixation Test in Tuberculosis," by Drs. E. P. Buddy and William F. Neun.

Discussion by Dr. R. B. H. Gradwohl, Dr. Ives closing.

"Some Social Aspects of the Tuberculosis Problem," by Dr. J. J. Singer.

Discussion by Drs. Seelig Simon and J. F. Bredeck. "Some Medical Aspects of the Tuberculosis Problem," by Dr. George Dock.

Dr. M. F. Engman presented a case of locomotor ataxia treated by the intraspinal method.

The president announced a memorial meeting for Dr. John Young Brown to be held at the St. Louis University on Friday, November 21, at 2 p. m.

The president also announced that Rabbi Sale would address the society at the meeting of November 25.

Attendance 169.

ARTHUR GUNDLACH, M.D., Assistant Secretary.

**PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY****Sixty-First Meeting, Monday, Oct. 13, 1919****1. EXHIBITION OF CASES.****A. A CASE OF SPINAL FRACTURE WITH COMPLETE PARAPLEGIA.—By DR. ERNEST SACHS.**

I am showing this case primarily to emphasize the importance of early operation in spinal fractures. The advice is generally given that if there is evidence that the cord has been completely cut across, operation should not be instituted, while if the cord is intact, some people at least advise early operation. When there is complete paraplegia with loss of sensation, it is impossible to determine in the first twenty-four or forty-eight hours whether the cord has been severed. Based on the work of the late Dr. Reginald Allen and Dr. Sweet of Philadelphia, I believe that all such cases should be explored early. They showed that a cord which was not severed still might have its function completely interfered with because of the hemorrhage and edema consequent to the injury. If the pia arachnoid is incised this swelling is relieved and some of the tracts in the cord which otherwise might ultimately be destroyed, may be saved. This case brought this out very strikingly for when the dura was opened and the cord exposed the bulging of the cord was so marked that it gave the appearance of a tumor. The pia arachnoid was opened. It is too early after operation to determine what the ultimate result will be but up to the present time the patient has had some return of deep sensation so that we hope improvement will soon set in. In the past year we have been doing most of our laminectomies under local anesthesia which I believe is very useful for such cases. In those cases in which the injury is in the middorsal cord so that the accessory respiratory muscles are affected, the use of local anesthesia tends to avoid the danger of a pulmonary complication.

**B. A CASE OF SPEECH DISTURBANCE.—By DR. T. S. BARNETT.**

Patient, a hotel keeper, aged 45, came to the hospital October 5 complaining of difficulty in speech. In his history it is to be noted that he had an acute discharging ear (left) when three weeks of age. He has had a discharge from this ear at rather frequent intervals ever since that time. On questioning the patient it is found that he has had subjective auditory sensations ever since he can remember. He also has had subjective sensations of smell, which he is unable to describe so far as a distinct odor is concerned, saying only that they are bad.

The present illness began March 18, 1918, when patient had an attack lasting from 11 a. m. until 10 p. m., during which he was disorientated and had five convulsions. It is not possible to determine whether or not he lost consciousness. Following this attack he has had disturbance of speech which he describes as an inability to find the right word. He also has noticed a difficulty in writing—he leaves out words. On April 21, 1919, he had an attack of pain in the right parietal region. Pain was very severe and burning in character. The speech difficulty became much more marked while the pain persisted. He has had pain in this same area at frequent intervals since then, but it has never been so severe as during the first attack.

On examination we find:

1. Beginning choked disc.
2. Subcortical aphasia, more sensory than motor in type.
3. A rapid, spontaneous lateral nystagmus.



4. Increased K.K.'s and wrist jerk on right.
  5. Oppenheim on left.
- From the history:
6. Subjective sensations of smell.
  7. Pain over the left parietal region.
  8. Change in disposition, more irritable of late.
  9. Chronic discharging left ear.

Preoperative diagnosis: Lesion at the first temporal convolution of the left side, most likely abscess. Tumor may be practically ruled out. Tuberculosis and lues are to be borne in mind.

Operation: Osteoplastic flap turned down on the left side. Center flap about 2 cm. above left ear. On reflecting flap entire dura at this point was covered with what looked like granulation tissue. At two places the dura had white deposits in it resembling somewhat those of calcium salts. Grossly very suggestive of tuberculosis. Center of mass incised, ventricle needle inserted to determine if dealing with an abscess—no pus encountered. Excised entire mass on dura and cortex. Rather large cortical defect left. Fascia lata transplant covering defect in dura. Pathological diagnosis—chronic inflammation. Tuberculoma.

#### DISCUSSION

DR. SACHS: This section shows a definitely chronic inflammatory mass, and there are one or two places that show definite giant cells. I don't think there is any question but that we are dealing with a solitary tubercle. It is the first case we have had. In Bruns's book on brain lesions, he reports cases of this type. Many of them, however, were in children; in fact, most of them were in children. It is interesting to reflect and conjecture whether this lesion could have been present from childhood. It is very positive that he had subjective sensation of hearing for eighteen years. It is possible that we are dealing with a lesion present since childhood.

#### C. A CASE OF PROGRESSIVE LENTICULAR DEGENERATION.—By DR. J. M. STANTON.

The patient, M. L., female, aged 19, gives this history: One grandfather was excessively alcoholic. Two suicides on the paternal side of the family. No family history of nervous or mental disease, epilepsy, or of a condition like that of the patient. The patient walked at one year and finished the ninth grade at fourteen. Had measles and mumps at six and scarlet fever at nine. At thirteen she had typhoid fever and about one month after recovery from this she noted a tremor of the right arm. About one year ago there developed a tremor of the left hand and arm. When fourteen she first noted difficulty in eating and speaking. She has never had any sphincter disturbance.

On examination there is found: A moderately coarse tremor of the arms while at rest. Spasticity of all four extremities, together with a left torticollis. Dysarthria of a moderate degree and a dysphagia less pronounced. The mouth is held semi-opened. Important negative findings are: The pupillary reactions and fundus are normal. There is no nystagmus. The tendon jerks are present, equal but somewhat diminished in the arms. No pathologic toe sign. Sensation is normal. Physical examination gives no evidence of hepatic disorder. Blood and urine examination and the blood Wassermann are negative.

The findings in this case are typical of an extrapyramidal motor disorder and correspond, with the exception of the rather long duration, with the series of cases exhaustively reported by S. A. K. Wilson in 1912 and called by him progressive lenticular degeneration.

#### DISCUSSION

DR. SCHWAB: This illustrates the type of case that a few years ago we would have been unable to have placed. For the last few years, ever since Wilson's paper published in 1912 appeared, we have been considering these cases as possible examples of Wilson's disease, and though we have not had any case which we are certain belongs to this category, we are getting a more and more accurate idea of what that syndrome implies. Some day perhaps we shall be able to demonstrate a case clinically and prove the existence of a bilateral lenticular degeneration in the type of case that Wilson has so beautifully described.

Just to show how valuable this point of view is, this case was referred with a questionable diagnosis of chorea.

There are two conditions that must be considered in such cases. One is pseudosclerosis, and the other a functional condition. Following shock there results often a condition of localized muscle spasm. Spasmodic contraction of muscle groups, particularly of the head and body was often found in war neuroses. There is no reason why in civilian neuroses groups of muscle spasms should not also become fixed. Her dysphagia, speech difficulty, change in writing, attitude, etc., suggest this is not a hysterical condition.

Another striking thing is that the symptoms in the case are supposed to have followed an attack of typhoid fever, and the relation of typhoid fever to liver conditions and gallstones, might be a direct factor in the liver condition associated with bilateral lenticular degeneration.

#### D. CASE OF CONGENITAL SYPHILIS.—By DR. MARTHA MAY ELLIOT.

Patient is a girl of 12 years of age coming to hospital because of sores on her legs. Family history: Mother died of erysipelas; father not living with family; nine children, four died in infancy. Previous history: "Infantile paralysis" at six weeks; no history of snuffles or skin eruption; always sickly in infancy. At two years had swelling of left forearm which did not break down but gradually disappeared. Three years ago had severe inflammation of eyes with blindness, photophobia and pain. Apparently interstitial keratitis. Before she recovered from this a lump appeared on her forehead which broke down and remained ulcerated until eight months ago. Two years ago the first ulcer came on her leg and since then there has been a continuous ulceration of both legs alternately healing and breaking down. Coincident with the appearance of these skin lesions the patient began to have a hacking cough, raised a small amount of sputum off and on. There were no severe pulmonary symptoms.

Present history: Shows an undersized, poorly nourished girl. Epitrochlear glands are palpable. Head is somewhat small and shows a scar on forehead where there is evidently loss of bone. There is marked internal strabismus, exophthalmos, astigmatism and myopia. Pupils are unequal and irregular. Teeth are not Hutchinson in type but carious. Heart negative. Lungs show area of diffuse infiltration at right lower lobe with signs of consolidation just inside the angle of the scapula. Liver is very large, extending 3 cm. below costal margin in nipple line. Spleen not palpable. Extremities: there is a swelling on left ulna. Marked sabre shins, knock knees, limitation of motion in both knees, with extensive ulceration of both shins.

Laboratory findings: Wassermann on blood serum ++++. Wassermann on spinal fluid negative. Complement fixation for tuberculosis weakly positive. Two von Pirquet's skin tests negative. Intradermal tuberculin test negative. No sputum examination



could be made as patient raised none. Urine and blood counts normal. Roentgen rays of lungs showed diffuse peribronchial thickening and fibrosis, most extensive at right lower lobe. Plates of bones show osteoperiostitis of left ulna and both tibiae.

Treatment: Patient has been given in all 1.7 gm. of arsphenamin intravenously, seven doses of Mxv each of  $\text{HgCl}_2$  1 per cent. i.m., and gray powder by mouth. The ulcers on her legs have healed completely but there is no change in signs in lungs.

Diagnosis: Hereditary syphilis, advanced. Osteoperiostitis (syphilitic) with gummata. Interstitial pneumonia—possibly syphilitic in origin. Myopia, astigmatism, strabismus.

#### DISCUSSION

DR. MARRIOTT: This child is interesting because she shows to an extreme degree those lesions which are characteristic of advanced, untreated, hereditary syphilis. Involvement of the lungs in hereditary syphilis is unusual. With the exception of "white pneumonia," a condition found only in the lungs of stillborn children, the types of lesion occurring are the gummatous formation and an interstitial pneumonia. The latter is more frequently observed. This child has a chronic pulmonary lesion with a considerable degree of fibrous change as shown by the roentgen-ray picture. Tuberculosis has been ruled out by the repeated negative von Pirquet tests, no tubercle bacilli have been demonstrated in the sputum, and the complement fixation test for tuberculosis is of the type often observed in patients with a positive Wassermann reaction. There is no history of an attack of pneumonia that might have resulted in a chronic bronchopneumonia. No unusual pulmonary parasites have been found in the sputum. The process is an afebrile one. We know that the child has advanced syphilis. The probability is that the pulmonary lesion is a syphilitic interstitial pneumonia.

DR. TERRY: It seems to me in the present state of our knowledge as to the actual inheritance of syphilis it is preferable to employ the term "congenital" for cases like the one shown this evening. There is not sufficient evidence that the disease syphilis is transmitted as an hereditary trait through parent to offspring like polydactylism, for example. The name "congenital" defines the condition accurately and is at the same time comprehensive enough to admit of the heritable nature of the disease should that be established.

## 2. EXPERIMENTAL STUDIES ON POISONOUS GASES USED IN THE WAR.—By DR. E. K. MARSHALL, JR.

The poisonous gases which have been used in warfare may be classified roughly into rather ill-defined groups on the basis of their physiological action as follows: (1) Lung irritants, as chlorine, phosgene; (2) lacrymators, as benzyl bromide, bromoacetone; (3) sternutators, as diphenylchlorarsine; (4) vesicants, as dichloroethylsulphide, and (5) paralytics, as hydrocyanic acid.

One of the first points which must be determined in investigating a poisonous gas is its toxicity, this determination which appears easy is extremely difficult, due to mechanical features of the apparatus, the tremendous individual variation in susceptibility of animals of the same species and the bizarre resistance of animals of different species. This was illustrated by examples.

One of the most interesting compounds used in warfare was dichloroethylsulphide or the so-called "mustard gas." Its value in warfare depends on its insidiousness and its persistency. The effect of this substance consists of an irritation of the eyes, skin and respiratory tract, giving rise to conjunctivitis and superficial necrosis of the cornea; hyperemia, edema,

vesication, and later necrosis of the skin, leading to a skin lesion of great chronicity; and congestion and necrosis of the epithelial lining of the trachea and bronchi. In animals exposed to concentrations of this "gas" vomiting and diarrhea, hyperexcitability and convulsions, and effects on the heart indicate a systemic action after absorption through the lungs. Absorption through the lungs and skin has been definitely proven in other ways. Experimental evidence has been obtained that the mechanism of the action of this substance consists essentially in the intracellular liberation of hydrochloric acid which is responsible for the damage. This has a definite application to the search for a successful therapy of the condition which has so far proven unsuccessful. The fact that all the so-called "war gases" more or less yield a halogen acid on hydrolysis suggest that a common explanation may explain their mode of action.

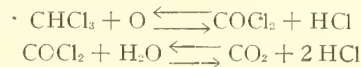
In regard to the action of mustard gas on the skin, it is well known that some persons are more rapidly affected than others. We have been able to devise simple tests for determining the susceptibility of the skin of an individual to mustard gas. Without going into detail as to the methods used, I may summarize certain interesting facts which have been discovered. One man may be 600 times as susceptible to the action of mustard as another. Negroes, as a race, are far more resistant than white men. About 2 to 3 per cent. of white men are hypersensitive, while 20 to 40 per cent. are resistant. If a hypersensitive and resistant man are exposed to mustard gas, the former will undoubtedly receive severe skin burns, while the latter may entirely escape them.

#### DISCUSSION

DR. GRAHAM: I have been intensely interested in this talk of Dr. Marshall's, and I feel that I voice the sentiments of everybody here when I congratulate him on the brilliancy of the results achieved.

It is unfortunate in some ways that, because mustard gas has gone out of use, his results will perhaps not have the immediate practical value that they otherwise would have, but nevertheless, I am sure that they are going to be applicable to a great many things.

I have been particularly interested because Dr. Marshall's work fits in somewhat with some work which I happened to do a few years ago with chloroform and other alkyl halides. Everyone is familiar with the fact that of the common anesthetic substances (chloroform, ether, nitrous oxide), chloroform is by far the most toxic and that furthermore it manifests its toxic symptoms in such a manner that death may result two or three days after its administration. The lesions of this so-called "late chloroform poisoning" consist of the syndrome of necrosis of the central portion of the liver lobule, parenchymatous fatty changes, edema and a tendency to the production of hemorrhages. We were able to obtain a large amount of evidence which indicates that the late toxic effects of chloroform are due, in a large part at least, to the intracellular liberation of hydrochloric acid from the chloroform molecule. This decomposition of chloroform is apparently nothing but oxidation in the presence of water. The reaction can be represented as follows:



By the oxidation of the chloroform and the hydrolysis of phosgene three molecules of hydrochloric acid are formed from one of chloroform. This reaction occurs with great ease when chloroform is exposed to air and light at room temperature; and it is therefore not difficult to imagine its occurrence in the body. There are a large number of facts which tend to support this view. I shall mention only a few

of them this evening. Hydrochloric acid alone experimentally is capable of producing the same fundamental changes as chloroform except for a different distribution of the necrosis in the case of the liver, for example. In chloroform poisoning there is an increase in the output of neutral chlorids in the urine, a fact which suggests that hydrochloric acid is formed in the body. Substances analogous chemically to chloroform, like bromoform and iodoform, produce lesions in every way identical to chloroform; and after their administration neutral salts of hydrobromic and of hydriodic acid respectfully appear in the urine. Moreover, the ability to produce this picture of "late chloroform poisoning" is a characteristic of apparently all those substances which belong chemically to the group known as alkyl halids. Thus ethyl chlorid, ethyl bromid and ethyl iodid all produce this characteristic picture. That these lesions are not the result merely of the presence of the halogen atoms in the molecule is shown by the fact that they cannot be obtained by poisoning with chloral ( $\text{CCl}_3\text{-CHO}$ ) which, like chloroform, contains three atoms of chlorine and is in addition a narcotic substance. In the body chloral is not decomposed in such a way that hydrochloric acid is formed. It is excreted almost entirely as triethylglucuronic acid.

It may be that some of you have recently read an article by Davis and Whipple in the *Archives of Internal Medicine* in which a rather bitter attack is made on this idea. It seems to me that this attack is unfair and I intend to answer it in a later publication. These authors utterly fail to grasp the point. They misquote me in several places, and they are apparently unable to understand what I am talking about. Perhaps it is because of my inability to express myself clearly. In my work I had been able to diminish considerably and in one instance to inhibit completely, the lesions of chloroform poisoning by the administration of sodium carbonate in a hypertonic sodium chlorid solution. Because these authors were unable to influence materially, by the administration of sodium carbonate, the production of the lesions in chloroform poisoning, they question the whole idea of the importance of hydrochloric acid in the production of the lesions. At no time have I taken the position that it could be assumed that sodium carbonate would always afford protection. As Dr. Marshall has stated tonight, sodium carbonate does not penetrate the cell readily and therefore cannot readily neutralize an acid formed within the cell.

One thing which I would like to mention, is perhaps an old story, but I have never seen it mentioned since the story was told me. Dr. Wells of Chicago told me that he had occasion to look up the properties of mustard gas, which Dr. Marshall has already told you was discovered by Victor Meyer. In the first edition of Meyer and Jacobson's "Handbook on Organic Chemistry," there is a liberal description given of mustard gas, its irritating properties on the skin, etc. Later editions have taken that out completely, there being no reference to mustard gas. It seems that that is a very interesting thing, which the German government might have difficulty in explaining, particularly in the light of the claim by the Germans that the use of poisonous gases was started by the allies.

DR. SCHWAB: I would like to ask Dr. Marshall if he could explain cases of arsenical neuritis which followed gas poisoning. These cases came in about a month or two before the armistice was signed.

DR. MARSHALL: I think those were due to gas used by the Germans. It was diethylchlorarsin ( $\text{C}_2\text{H}_5\text{AsCl}_2$ )  $\text{AsCl}_3$ . It has somewhat the properties of mustard gas, being an eye, skin and lung irritant and is very rapidly absorbed and produces the effects of arsenic. We experimented with this substance and got effects on the nervous system. This gas was used only two or three months before the armistice was signed.

### 3. ON THE PRESENCE OF FLUID IN THE PULMONARY ALVEOLI.—By DR. ROBERT J. TERRY.

It is assumed that the walls of the pulmonary alveoli are moist as a necessary physical condition for the free diffusion of gases through the membranes to and from the blood. It is known that a mucous fluid is present in appreciable quantity in the larger air tubes of the dead and living lung. The question has presented itself in how far fluid is distributed in the direction of the ultimate branches of the air tubes and the nature of this fluid. Experiments were conducted on the lungs of hogs obtained from the packing house and on lungs of mice and cats killed by anesthesia and by decapitation. The superficial alveoli were studied under the binocular microscope with the field illuminated by an arc lamp. 1. They were observed to vary considerably in form and size, but were alike in each showing a clear, bright, apparently empty cavity. The surface was gently swept with a small rod (needle) so as to compress the alveoli over a small area, the rod removed and the alveoli permitted to expand: bubbles were seen, apparently in the alveoli. 2. By gently massaging the surface with the side of the needle, the entire area became filled with bubbles of different sizes and when the massaging was stopped the compressed alveoli were seen gradually to expand, the bubbles coalesce until finally the area presented the appearance first observed—excepting that some bubbles still remained, apparently outside the alveoli. It seems probable that the latter were formed in the subserous lymphatic vessels. As against the probability of all the bubbles being in the lymphatics is the fact of their uniform distribution over the massaged area and not in lines or columns which is to be expected if confined to lymph channels. In support of the interpretation of the bubbles being in the alveoli is the phenomenon of coalescence of bubbles during the expansion of the alveolus and eventual disappearance of the bubbles in an area occupied by the expanded alveolus. 3. A capillary glass tube was rapidly thrust into an alveolus, which had been selected under the binocular, and fluid was seen to rise in its lumen: the examination of this fluid under the microscope showed no formed elements, excepting an occasional erythrocyte. To guard against the possibility of the source of the fluid which entered the tubes being in the subserous lymph vessels, capillary tubes were prepared having the tips plugged with paraffine; a tube was thrust into the lung  $\frac{3}{4}$  mm. beneath the surface and parallel to it for a distance of about 10 mm. and the tip then broken off by pressure with forceps from the outside: fluid was recovered in the tube. 4. These experiments on dead material were repeated on the lungs of living cats under both chloroform and ether anesthesia. A tube was tied in the trachea and connected with a reservoir filled with compressed air which could be admitted under control to the tracheal tube. A small area of the thoracic skeleton was exposed on one side and opened, and the expanded lung immediately examined under the binocular. Massage experiment (2) gave results as described with considerably smaller amount of bubbling. Tests with unsealed capillary tubes (3) resulted in filling with, first, a thin stratum of blood, followed by a column of fluid containing bubbles; microscopic examination revealed no formed elements in the latter.

#### DISCUSSION

DR. SCHAFFER: I have been very much interested in hearing of Dr. Terry's experiments during their prosecution. I think it should be pointed out that on theoretical grounds, it would be advantageous that the least amount of fluid be present which is sufficient to keep the walls of the alveoli moist. Obviously, they must be moist, because oxygen and carbon dioxide do not diffuse rapidly through dry membranes. If a



larger quantity of fluid is present in the alveoli, the passage of oxygen through that liquid into the blood stream and of carbon dioxide in the reverse direction will materially be retarded in proportion to the thickness of the layer of fluid covering the walls of the air passages. Diffusion in liquids is much slower than in gases.

**DR. BURROWS:** It is true that a study of the diffusibility of oxygen into liquids has shown that if fluid exists in the normal lung it must be in very small quantities. I was interested some time ago in studying the diffusion of oxygen into blood clots using red cells as indicator. Clots of chicken blood were used. The red cells of chickens are nucleated and have a higher metabolism than the nonnucleated cells of mammals. I found that the hemoglobin in the cells of these clots became reduced in all parts of the clot except in a layer 0.5 to 0.7 mm. in thickness which lay on the surface exposed to air. This layer of cells containing oxyhemoglobin filled cells was sharply defined from the mass of cells containing reduced hemoglobin. In the same way I found that all the cells became reduced in clots covered by a layer of clotted plasma or liquid serum which was not agitated when the layer was made greater than 0.5 or 0.7 mm. in thickness. From these observations it seemed evident that oxygen does not diffuse readily any great distance into body fluids. In the same way I have found that its diffusion into tissues is also limited.

**DR. TERRY:** In reference to Dr. Burrows' observation, it should be stated that the amount of fluid recovered in the alveolus would constitute, if spread over the alveolar wall, a layer exceedingly thin (the diameter itself of the cat's alveolus is only 0.25 mm.). The composition of this fluid is not known and it is only an assumption to assign, as has been suggested, its origin from the blood.

#### 4. SUBARACHNOID IRRIGATION IN RELATION TO THE TREATMENT OF CERTAIN FORMS OF MENINGITIS.—By Drs. L. B. ALFORD AND S. I. SCHWAB.

In this paper Dr. Alford gave a brief report of some experiments in which the subarachnoid space of living animals and of the cadaver was irrigated, and reviewed some of the literature on the subject.

In animals a trephine opening was made in the parietal region and a laminectomy done in the lumbar region. Saline and other solutions were passed both ways between these openings and also from lateral ventricle to spine.

It was found that, aside from saline, boric acid 1:33, argyrol 1:100, formalin 1:200, lysol 1:300, and potassium permanganate 1:2,500 could be used without proving fatal to the animal. The solutions came in contact with practically the whole surface of the central nervous system.

Similar irrigations were carried through on the cadaver. An ordinary lumbar puncture provides the spinal opening while a trephine opening made with burr drills constituted the cranial outlet. Ventricular puncture was also done and fluid passed both ways between spine and ventricle. A much smaller part of the cortex came in contact with the solution than was the case with the animals.

Leonard Hill performed similar experiments twenty years ago but apparently used dead animals. Recently workers in the Army Neurological Laboratory have essentially repeated these experiments. They found that large amounts of salt solution produce toxic effects and a modified Ringers solution to be preferable. They found further, in animals with experimental meningitis that life was prolonged 100 per cent. by a single irrigation. They also inserted needles in the lumbar region and through the occipito-atlantal ligament and passed solution both ways between them both in animals and the cadaver. One such irriga-

tion was done on a patient with meningitis. They found finally that after injection of certain substances in the subarachnoid space, marked inflammation and adhesions were produced, which in some cases proved fatal.

Dr. Alford concluded (1) that subarachnoid irrigation would prove a useful method of studying the physiology and pathology of the spinal fluid and (2) that it might be employed in the treatment of certain cases of meningitis.

Dr. Schwab called attention to the distribution of the solution in the irrigation on the cadaver and pointed out that it is the same as that of the basal form of tuberculous meningitis. If this method is possible in human beings, it should be useful in clearing away the exudate in this type of case.

It was with the object of ascertaining the views of the surgeons, pediatricians and internal medicine men, who now see and treat these cases that this paper was read.

#### DISCUSSION

**DR. SACHS:** These experiments certainly should be continued very intensively, as they are of great interest.

One or two points would suggest themselves, in the first place, before considering applying them clinically, are these solutions, which as I understand Dr. Alford has found harmless, strong enough to kill bacteria? My impression is that most of them are not.

In the next place, from Dr. Alford's drawings, it is quite evident that it does follow that he is able to irrigate the subarachnoid space generally, except apparently in the case of the medulla where it is deposited in the region in which the trephine is made. In other words, the fluid is not spread generally in the subarachnoid space.

Another difficulty would be in some cases where the brain is forced up against the cranial cavity, which interferes with irrigation.

I cannot help recalling the enthusiasm which was very general about fifteen years ago in cases of general peritonitis, when irrigations were attempted in the peritoneal cavity; a number of people will remember the wave which spread through the surgical world. It was soon realized that you could not get irrigation generally in the peritoneal cavity and that in no cases could one reach all infected areas, therefore the method was not effective.

Another thing that seems to me in the case of meningitis to be a most serious problem, is that in treating meningitis, or infections of the peritoneal cavity, our principal purpose should be to reach the origin of the infection. That is so well illustrated in the treatment of appendicitis, with wide-spreading peritonitis. Those are some of the points that will have to be solved before it would be justifiable to apply it clinically.

**DR. DOCK:** I feel very much as Dr. Sachs does on this subject. Whether the solutions used can be fatal to bacteria seems to me to be rather important. If good results follow, I think they are likely to be due to hyperemia rather than bactericidal action.

I saw these experiments as Dr. Sachs referred to even longer ago. About thirty years ago my surgical colleague, Dr. Hadra, took up the problem and began by operating on recent cadavers. We found it was practically impossible to irrigate a healthy peritoneum thoroughly, even with large quantities of fluid. With considerable pressure, we could see that the fluids failed to pass through narrow channels so that the whole surface was never irrigated. If there was inflammation, as in penetrating wounds of the intestine, the surface became stuck together so that the difficulty was even greater.

I see one difficulty in irrigating around the medulla; in infections there we often find a mucilaginous mass so that direct action of the liquids on bacteria in the tissues would not be easy to bring about.

DR. MARRIOTT: At one time the intrathecal administration of antiseptics was in vogue for the treatment of epidemic meningitis. Flexner and his colleagues brought forth evidence to show that such use of antiseptics was harmful rather than otherwise. Not infrequently in the treatment of epidemic meningitis it is impossible for the injected serum to thoroughly distribute itself to all parts of the infected area, and in such instances the procedure outlined by Drs. Alford and Schwab would seem to offer the possibility of getting at otherwise inaccessible portions of the meninges. Thorough irrigation with a modified saline solution should clinically remove pus and if this were followed by specific serum, good results might be expected. Saline irrigation of the subarachnoid space might also be expected to be an aid in the treatment of other types of purulent meningitis.

In tuberculosis of the meninges one would hardly expect any form of local treatment to be beneficial. When meningitis occurs in the course of tuberculosis there is always a primary focus of infection elsewhere and usually a general breakdown of resistance on the part of the body to the tubercle bacilli. Irrigation of the meninges would remove some bacilli but others would be promptly brought in by the blood and lymphatics. I should not expect beneficial results from the treatment in this type of meningitis.

DR. KIRCHNER: I have for some time been interested in experiments of this nature, and I was led to them by an actual clinical experience, which probably emphasizes the point of the paper.

Some twelve years ago, a little boy, 12 years old, injured by a street car and suffering from a compound fracture of the skull, was admitted to the hospital and was treated in the routine way. The brain was found to be lacerated. He improved under treatment, and in a few weeks left the hospital. He was thought to be well and returned to school.

Shortly thereafter, however, he began to have headaches, and later was brought back to the hospital with symptoms of meningitis. He was put through the usual tests. At the site of the operation and the injury there was a swelling, and a lumbar puncture revealed a considerable quantity of pus. The original wound which was in the left temporoparietal region was opened and the pus evacuated. It occurred to us that inasmuch as pure pus came from the lumbar puncture, that there must be a direct communication with the abscess of the brain and that irrigation was indicated. With a lumbar puncture needle, saline solution was introduced into the spinal canal, and in that way the canal was irrigated, the irrigating fluid passing out through the opening in the skull. We have here a clinical case which illustrates the applicability of the procedure outlined this evening, and I am convinced that there is something worthy of trial in treatment of this sort in selected cases. It was demonstrated in this case that it is plausible and possible to irrigate in infections of this type, and I believe with careful study, one would be able to develop a technic that would be of value. Would like to add that under the treatment of subarachnoid irrigation the patient recovered.

DR. ERLANGER: I would like to point out that the difference Dr. Alford has found in the distribution of the injected solution over the surface of the brain in living animals and in the cadaver may not be as serious as it seems. Thorough distribution of the irrigation fluid is facilitated in the living by the arterial pulsations; this adjuvant is missing in the dead.

DR. BROOKS: In these experiments in which the subdural space was irrigated with a colored fluid, the fluid would necessarily flow along the line of least resistance. An infection of the same space also travels along the path of least resistance. This explains the similarity of the areas reached by the fluid

to those usually affected in meningitis. It would be interesting to produce a meningitis and subsequently do an irrigation of the subdural space. I am inclined to think, in this case, the irrigation fluid would pass along a different path than that found in the non-infected cases. It is probable that the irrigation fluid would travel around the infection rather than through it.

DR. BURROWS: I was very much interested in this problem when the war broke out. I was interested in finding some kind of fluid that would flow over all parts of a surface like the peritoneum. As far as I know such a fluid has not been found. In an ordinary meningitis the pus is in the subarachnoid space and not in the subdural space. Very rarely does one see pus in the subdural space. I have seen it only once in as many as 100 necropsies. That was a case of perforation of an abscess of the ethmoid sinus. In most cases of perforation there is pus also in the subarachnoid space and there is more there than in the subdural space. By the method of injection described the fluid does not fill the subarachnoid space nor enter it. It is an irrigation of the subdural space. The effect of such an injection must be indirect in most cases of meningitis. It does not reach and wash away the pus from the subarachnoid space. In fact, the subarachnoid space cannot be reached by the method described here tonight. This method may do good, however, as Dr. Dock says, in that it would tend to produce a hyperemia of the vessels in the walls of the subarachnoid space.

DR. ALFORD: I think Dr. Kirchner's case very interesting. It supplies the missing link in our chain of experiments, and shows how subarachnoid irrigation will work clinically. I hope he sees fit to publish his case.

I believe Dr. Erlanger's point is well taken. There are some indications in clinical results that subarachnoid irrigation will be useful. Good results from repeated lumbar irrigation have been noted in tuberculous and other forms of meningitis. The more thorough drainage and cleansing of irrigation should be much more effective. Most likely that most vulnerable part of the nervous system, the base, would thereby be thoroughly cleansed, and thus life be prolonged and opportunity given for nature to take care of the process elsewhere.

The objection mentioned by Dr. Brooks might be applicable in later stages of a chronic meningitis but should not be in the acute stages.

#### BUCHANAN COUNTY MEDICAL SOCIETY

The regular business of the Buchanan County Medical Society was held at the Community Hall, St. Joseph, on December 3, with the president, Dr. A. B. McGlothlan, in the chair.

A communication from Dr. P. I. Leonard requesting a report from members covering all cases of sore eyes in their practice, with special mention of trachomatous cases, was read and the members instructed accordingly.

A report of the committee on a resolution on the death of Dr. J. K. Graham was received and a copy of the resolution ordered sent to the family.

The executive committee was instructed to report at our next meeting the sentiment of the society on a renewal of the society's subscription as a whole to the *Medical Herald*.

The following banquet committee was appointed: Drs. J. M. Bell, W. L. Kenney, E. S. Ballard. This committee was instructed by a resolution to arrange a stag banquet.

The following officers were elected for the year 1920: Drs. L. J. Dandurant, president; H. S. Conrad, first vice president; T. M. Paul, second vice president; F. X. Hartigan, secretary; J. M. Bell, treasurer; Fred H. Ladd, censor for 1920-1922; F. H. Spencer, dele-



gate, 1920-1921; Daniel Morton, delegate, 1920-1921; A. E. Burgher, alternate, 1920-1921; W. H. Minton, alternate, 1920-1921.

Attendance 49.

#### Meeting of November 19

The scientific session of the Buchanan County Medical Society was held on Wednesday evening, November 19, at the Commerce Club, St. Joseph, with the president, Dr. A. B. McGlothlin in the chair. The minutes of the previous meeting were read and approved.

The program of the evening consisted of a paper by Dr. H. K. Wallace entitled "Treatment of Infected Joints." It was discussed by Drs. Elam, C. H. Wallace, Bansbach, Jacob Geiger.

The other paper was by Dr. W. H. Minton on "The Importance of Early Diagnosis and Treatment of Congestive Glaucoma." This paper was discussed by Drs. Leonard, Kenney, Farber, Proud, and closed by Dr. Minton.

A very lively discussion on hyperthyroidosis completed the program of the evening.

Attendance 41.

M. F. GOETZE, M.D., Secretary.

#### DAVIESS COUNTY MEDICAL SOCIETY

The Daviess County Medical Society had its regular meeting at the Y. M. C. A., Gallatin, Tuesday, Oct. 7, 1919. Those present were: Drs. J. D. Dunham, A. G. Minnick, L. R. Doolin, C. E. Griffith, M. A. Smith, P. L. Gardner, Thomas E. Cooper, J. L. Reich, and N. M. Wetzel. Visitors: Drs. C. C. Conover and J. Wallace Beil of Kansas City.

Dr. C. C. Conover gave an able and profitable lecture on "Myocarditis," illustrated with slides, which was very much enjoyed by all present.

Dr. J. Wallace Beil of Kansas City delivered a very instructive lecture on the care and treatment of the eyes of infants.

Talks were enjoyed from members who served in the Medical Corps of the Army and the subject of Spanish influenza was well discussed as to symptoms and treatment.

Dr. Thomas E. Cooper of Gallatin and Dr. Leslie Dunham of Pattonsburg were applicants for membership in the society. Dr. N. M. Wetzel resigned as secretary in favor of Capt. M. A. Smith, who was secretary before he entered army service. Dr. Wetzel's resignation was accepted and Dr. Smith was unanimously reinstated.

The Twelfth Councilor District, which includes Daviess County, held a postgraduate course Friday, October 10, at Excelsior Springs. A great many of the Daviess County physicians attended.

N. M. WETZEL, M.D., Reporter.

#### JACKSON COUNTY MEDICAL SOCIETY

##### Twenty-Fourth Meeting, November 4

The meeting being opened by the president, Dr. Van Eman, the following scientific program was given:

"Influenza," by Dr. E. C. Rosenow, Rochester, Minn.  
 "Syphilis in the Railroad Man, a Clinical Study of an Occupational Group," by Dr. J. H. Stokes, Rochester, Minn.

Attendance 145.

R. E. CASTELAW, M.D., Secretary, pro tem.

#### PROCEEDINGS OF THE COUNCIL

The regular meeting of the Council was held November 11, at 7 p. m., in Room 1010 Rialto Building. The minutes of the last meeting were read, corrected and approved.

Dr. Pearse, as chairman of the health committee, presented the following resolution:

WHEREAS, The milk supply of Kansas City has in the past suffered many interruptions in its distribution, changes in its quality and increases in its price, and

WHEREAS, There is evident need of a more perfect understanding as to its quality, inspection, continuous regular distribution, and maintenance of a relatively stable price, therefore be it

*Resolved*, That we request a conference of the officials of this society, the Consumer's League of Kansas City, and the officers of the Department of Milk Inspection for Kansas City with the representatives of the various dairy companies with a view of establishing a working agreement under the present ordinance or drafting a substitute ordinance which will do away with the evils attendant on the violent interruption of our milk distribution which injuriously affects both our people and the milk companies.

H. E. PEARSE, Chairman,

R. T. SLOAN,

J. D. GRIFFITH,

Public Health Committee, Jackson County Medical Society.

After a general discussion Dr. Schaffler moved that the resolution be approved and that the president appoint the representatives from the officers. Seconded by Dr. Castelaw. Carried.

Dr. S. H. Richman, 315 East Tenth Street, was elected to membership on transfer from Racine (Wis.) County Medical Society.

On motion it was decided that there be no meeting of the society December 23, on account of holiday week.

R. M. HIBBARD, Assistant Secretary.

#### Twenty-Fifth Meeting, November 18

The president, Dr. Van Eman, called the meeting to order.

Consideration of the resolution on the sale or lease of the property was postponed to the meeting of December 2.

The following scientific program was given:

Symposium on the Physically Defective Individual from the Orthopedic Standpoint.

"Recognition of Postural Defects in Childhood; Corrective Methods Employed in Army Divisions in France," by Dr. Frank Dickson.

"Handling of These Cases in the Army Camps in This Country," by Dr. H. L. Hess.

"Plan of Dealing with This Type of Case in the Hospitals of France," by Dr. C. B. Francisco.

"The Government's Plan of Dealing with the Disabled Soldier," by Dr. Russell Hodge.

"Suggestions for Improving These Cases in the Civil Community," by Dr. R. McE. Schaffler.

Dr. Armour supplemented the program with a good report of the work done by the board of education of Kansas City in the education of the crippled and handicapped children of school age, and asked for stronger support of the society in broadening and enlarging this work in every way. Dr. Armour also enlarged on the reports, mentioned in the paper by Dr. Schaffler, of the Presbyterian Home for Crippled Girls and the Scottish Rite Home for Crippled Boys, in the city.

Attendance 120. HUGH MILLER, M.D., Secretary.

#### MARION COUNTY MEDICAL SOCIETY

The regular monthly meeting of Marion County Medical Society was held on the evening of December 5, the president, Dr. John J. Bourn, in the chair. There were also present Drs. E. T. Hornback, I. E. Hill, W. H. Hays, J. W. Hardesty, Thomas C. Chowning, R. H. Goodier, Mary S. Ross, and visitors, Drs. Hall and Murphy of the C. B. & Q. Relief.

Officers for 1920 were elected as follows: Dr. Hardesty, president; Dr. Hill, vice president; Dr. Ross, secretary-treasurer; Dr. Chowning, delegate for

1920-1921; Dr. Roselle, alternate delegate; Dr. Waldo, censor for 1920-1922.

Dr. J. W. Hardesty addressed the meeting giving a brief synopsis of his two years' overseas service with the British and American armies. He began with a description of the confusion in the service incidental to the hurry of the first months of our preparation for active service, explaining how it was unavoidable to a certain extent, told of the gloomy trip across the submarine areas, gave an account of a frustrated submarine attack, described his first impressions of our English cousins, and spoke of the magnitude of the British effort which was evident even by a hurried glance. He gave a sketch of his hurried trip through England and to "The Front" in France—showing how it was possible with the transportation facilities to make the trip from Hannibal to the firing line and service there within six weeks. He told in detail of the organization of the British Army Medical Service as experienced at the base, at the front and at intermediate stations. He gave a description of his experience during the Ypres offensive of 1917, telling of the rush of cases through the hospitals and aid posts during the progressive phases of the battle, and related how one hospital with a staff of six medical officers and about twice that number of trained hospital orderlies were able to care for 2,000 cases within twenty-four hours, operating on 200 of the cases under general anesthesia. He emphasized the efficiency of the organization and the value of routine procedure, showing how it was necessary under such circumstances and contrasting it with the elaborate organizations of some of our civilian hospitals so much in evidence in our large cities.

He discussed the organization and minute workings of the large base hospitals, telling of his work at these during the dark months of April, May, June and July, 1918.

He concluded with a description of the fighting at "The Front" during the final three months of the war giving in detail the more or less intricate workings of a battalion in action and the evacuation of the wounded to the hospitals.

MARY ROSS, M.D., Secretary.

#### MISSISSIPPI COUNTY MEDICAL SOCIETY

The Mississippi County Medical Society met in regular session at Charleston, Tuesday, November 4, at the Y. M. C. A., with the following members present: Drs. A. W. Chapman, H. L. Reid, F. S. Vernon, W. P. Howle, C. C. Presnell, A. H. Marshall, W. S. Love, and M. H. Shelby. The minutes of the previous meeting were read and approved.

On a favorable report from the board of censors Dr. James Lec was unanimously elected a member.

As we have several doctors in the county that are not members of the society it was moved that the secretary write a letter to these men inviting them to present their applications for membership.

Papers were read by Dr. Howle on "The History of Influenza," and by Dr. Chapman on "The Complications of Influenza." An interesting discussion followed, all the members present taking part.

Our next meeting will be held at Charleston, Tuesday, December 2, at the Y. M. C. A. Building.

M. H. SHELBY, M.D., Secretary.

#### SALINE COUNTY MEDICAL SOCIETY

The Saline County Medical Society met in regular session at Marshall, Nov. 11, 1919. After a short business session the society listened to two able papers presented by Dr. George C. Mosher of Kansas City. The papers, "Management of Posterior-Occipital

Presentations," and "Indications for Forceps," were instructive, freely discussed and thoroughly enjoyed by all present.

The next meeting will be held on December 9.

S. P. SIMMONS, M.D., Secretary.

#### ST. LOUIS COUNTY MEDICAL SOCIETY

The society was called to order at Webster Groves, November 12, at 3:40 p. m., by the president. Members present: Drs. Miles, Reynolds, Jones, Armstrong, Sandfos, W. H. Townsend, Dunnivant, Conway, Koch. The minutes of the previous meeting were read and approved.

The following new members were elected: Dr. Phillips N. Davis and Vincent F. Townsend, both of Maplewood.

The office of vice president being vacant by reason of the removal of Dr F. C. Ewing from the state, a motion was made and carried that the society proceed to elect a successor to fill his unexpired term. Dr. C. A. P. Dunnivant of Kirkwood being the only nominee he was elected by acclamation.

A communication from Dr. H. T. Randle of Lawrence, Kan., asking the secretary to issue a certificate of good standing in the society to be used by him in his application to the state board of Kansas for license to practice medicine in that state, was read. It appearing that the doctor is delinquent in his dues since 1917, and not now a resident of this state, the matter was referred to the board of censors with instructions to report at the next meeting.

On motion duly carried the president appointed the following members as a committee to arrange for the annual meeting of the society in December: Drs. Vincent Townsend, Garnett Jones, A. Conway.

Dr. Miles reported a case of reflex symptoms caused by laryngeal irritation which was promptly relieved by local treatment.

Dr. Armstrong reported a case of carcinoma affecting the lung.

Dr. Jones reported a case of goiter treated by carbolic acid injections with unfavorable results.

A motion was carried asking Dr. Koch to act as essayist at the annual meeting in December and give an account of his experiences in France.

A. CONWAY, M.D., Secretary.

## BOOK REVIEWS

**GYNOPLASTIC TECHNOLOGY.** With a chapter on "Sacral Anesthesia." By Arnold Sturmdorf, M.D., Clinical Professor of Gynecology, New York Polyclinic Medical School, etc. Illustrated with 152 halftone and photo-engravings in the text, some in colors, and 23 full-page plates, with 35 figures, all in colors. Philadelphia: F. A. Davis Company, 1919. Price, \$5.

In the preface we are told that this book is an "elaborated compilation of the author's previous publications on the various phases of gynoplastic technology."

Some wide statements are made which seem rather questionable, more particularly in the first chapters. There is one chapter on sacral anesthesia in which the author tells us that the pelvic floor does not offer an ideal field for major surgery under this type of anesthesia. The chapters on endocervicitis are especially interesting. The various operations are clearly described and the illustrations as a whole are fair. Numerous writers are extensively quoted and there is a good bibliography appended. Not many new points have been presented in this work but the ground is well covered.

W. J. F.



**TRENCH FEVER.** A Louse-Borne Disease. By Major W. Byam, R. A. M. C., et al. With an introduction by Lieutenant-General Sir T. H. Goodwin, K. C. B., Director-General Army Medical Services, A Foreword by Major-General Sir David Bruce, K. C. B., and a Summary of the Report of the American Trench Fever Commission by Lieut. R. H. Vercoe, R. A. M. C. London: Oxford University Press American Branch: 35 W. 32d Street, New York, 1919. Price, \$4.25.

This volume, written by the foremost investigators of trench fever during the late war, is thoroughly scientific and presents the subject from its many angles in a clear and concise manner. The report of the results of the authors' experiments is especially interesting. The reviewer knows of no book on this subject that equals it and would recommend it highly to those who are interested in a condensed and comprehensive treatise on this subject. F. D. G.

**THE OPERATIVE TREATMENT OF CHRONIC INTESTINAL STASIS.** By Sir W. Arbuthnot Lane, Bart., C. B., Consulting Surgeon to Guy's Hospital, and to the Hospital for Sick Children, Great Ormond Street. Fourth Edition. Revised and Enlarged. London: Oxford University Press. American Branch, 35 West 32d Street, New York.

In this new edition of a very stimulating and useful work the well known views of Lane are set forth with great clearness and force. As in the edition of 1915, Mutch and others contribute chapters on the bacteriology, the skiagraphy, etc., of the large intestine. In the present volume the new articles by Prof. Arthur Keith and J. Q. Adami will specially attract attention. Keith reached views similar to Lane's regarding the development of accessory mesenteries or studies in development. He finds that mesenteries are like ligaments as supporting structures in that they only come into play to check or help check excessive motion, while the musculature of the abdominal wall is the means by which the viscera are kept in their proper position. Keith is fully in accord with Lane regarding the importance of intestinal stasis but attributes its incidence to interference with the neuromuscular mechanism of the large gut. It will repay anyone to study Keith's article.

Adami was for a long time puzzled by the disease affecting cattle which was popularly (and correctly) attributed to eating ragwort. In the cattle, hepatic cirrhosis developed and from the various bacilli the coli were cultivated with regularity but these bacilli did not produce the disease in healthy animals inoculated. Adami found the ragwort when eaten rubs up an irritation of the bowel together, it may well be, with some degeneration of the liver cells with subsequent replacement fibrosis. From these and many other observations and considerations he believes that the absorption of toxic products of intestinal fermentation lowers the vitality of the tissues and may thus render them more vulnerable to the deleterious action of pathogenic microbes, permitting microbes of low virulence, which in normal health would have little effect, to multiply and set up definite lesions. In producing these lesions Adami thinks the "subinfection" plays the major rôle.

These chapters by unprejudiced laboratory workers give great support to the theories and practices of Lane whose pioneer and enthusiastic work in various fields has met much of that vitriolic scorn which is commonly poured out on seers. J. F. B.

**AN OUTLINE OF GENITO-URINARY SURGERY.** By George Gilbert Smith, M.D., F.A.C.S., Genito-Urinary Surgeon to Out-Patients, Massachusetts General Hospital, etc. Authority to publish granted by the Surgeon-General, U. S. A. Illustrations by H. F. Aitken. Philadelphia and London: W. B. Saunders Company, 1919.

Dr. Smith has produced a concise, well written book on modern methods of treating genito-urinary conditions that is well worth the attention not only of the general surgeon but also of the urologist. A condensed account of an illustrative case taken from reports of specialists frequently occurs, but the reference to the author of the report is not always clear. Every chapter with a selected list of references to original articles bearing on the condition described. C. D. P.

**RECONSTRUCTION THERAPY.** By William Rush Dunton, Jr., M.D., Assistant Physician at Sheppard and Enoch Pratt Hospital, Towson, Md., etc. Illustrated. Philadelphia and London: W. B. Saunders Company, 1919.

The author in the opening page presents his "crede" as a theme for the booklet which follows, "Occupation is as necessary to life as food and drink—sick minds, sick bodies, sick souls may be healed through occupation." He might have added that "work" and "sweat of his brow" though traditionally sent as a curse have become mankind's greatest blessing. The book deals in an instructive and detailed manner with the problems confronting those engaged in this important field of therapy. J. Q. C.

**LES LÉSIONS DES NERFS TRAITEMENT ET RESTAURATION.** Par Mme. Athanassio-Benisty, ancien interne des hopitaux de Paris (Salpêtrière). One vol. de 158 pages et 66 figures (Masson et Cie, Editeurs). 7 fr. net.

This timely brochure sets forth in compact form and logical sequence the results of observations by French surgeons and neurologists on thousands of peripheral nerve injuries occurring during the great war. It contains little save hard facts and the accurate statements of definite results; nothing is included of a hypothetical nature; methods of examination and treatment are explained in a clear and concise manner and the text is enriched by many illustrations of apparatus and simple operative procedures.

The work covers in detail: the macroscopic and microscopic appearance of lesions of wounded nerves, methods of intraneural localizations, the clinical evidences of repair of injured nerves, certain modifications of response to electrical stimulus found along the paths of wounded nerves, the return of voluntary motion, the evidence of severe injuries to nerves, the surgical treatment of nerve wounds and their physiotherapeutic treatment of same.

A separate section is devoted to descriptions, with drawings of simple and universally applicable forms of retention apparatus found by actual practice to be best suited for the postoperative and regenerative period.

Instruments and apparatus described may be reproduced at small cost, and are those chosen for the greatest utility by a commission of "La Société de Neurologie de Paris" selected in 1916 to investigate and report on the availability and indication for the use of such apparatus.

Therapeutic use of the roentgen ray and ionization at the time of operation is touched on. These measures would seem to have only a limited field. A complete bibliography of sources of information is also included.

To all neurologists, general, and orthopedic surgeons, this little work should make an instant appeal. W. W. H.

**ELECTRICITY IN MEDICINE.** By George W. Jacoby, M.D., former President of the New York Neurological Society and of the American Neurological Association, etc., and J. Ralph Jacoby, A.B., M.D., Fellow of the New York Academy of Medicine, etc. With 262 illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. Price, \$5.

It is surprising how any book can live up to the above title but it is remarkable how well the authors have contrived to include in 610 pages all the essential knowledge on electricity in medicine, with the exception of the roentgen ray. They have, however, attempted to describe some roentgen apparatus without any diagnostic discussion. The pages on the physics of medical electricity are very complete. The chapter on the electrophysiology of motor nerves and muscles is splendid and gives the detailed information so essential in the estimation of nerve injury, prognosis and diagnosis demanded in medico-legal cases.

This book is an elaboration of an original text used by the senior author for the system of physiologic therapeutics edited by J. Solis Cohen in 1901. Electrical apparatus has changed considerably in the meantime as the batteries have been replaced by apparatus using the lighting circuits. It is a question whether there has been more than the average increase in the use of electricity by physicians. Sanatoriums have increased and these quite generally are equipped with electrical methods but it is doubtful whether the profession in general has a more exalted opinion of electrical methods. However, there must be virtue in electrical methods and the profession should study this subject. E. H. S.

**A TEXTBOOK OF MATERIA MEDICA FOR NURSES.** By A. L. Muirhead, M.D., Professor of Pharmacology, Creighton Medical College, Omaha, Neb. Illustrated. St. Louis: C. V. Mosby Company, 1919. Price, \$1.50.

Textbooks on materia medica for the undergraduate nurses in training are very frequently too exhaustive in their treatise of the subject matter. This book is primarily designed to give the undergraduate nurse, with her limited time, a working knowledge of materia medica.

The book is divided into twenty-four chapters and written in language the nurse can readily understand. The text is well written, the introduction dealing with definitions, action of drugs, dosage, methods of administering, preparations, and weights and measures. The subject matter in the subsequent chapters is well arranged, grouping of the drugs, plants and their alkaloids, chemicals, etc., in accordance with their pharmacologic action.

The book is so short and so easy to read that it should have a wide circulation in training schools for nurses. I. H. B.

**EXPERIMENTAL PHARMACOLOGY.** By Hugh McGuigan, Ph.D., M.D., Professor of Pharmacology in the University of Illinois, College of Medicine, Chicago. Illustrated with 56 engravings and 7 colored plates. Philadelphia and New York: Lea and Febiger, 1919. Price, \$2.75.

The purpose of this book is "to present experimental pharmacology in a brief, concise form yet to give the student an adequate view of the field." The book is more than a mere laboratory guide or description of experiments. A considerable portion is taken up with a classification of drugs according to their effects and mode of action. Over 300 experiments, some of them very brief, are interspersed in the text. The descriptions of the experiments is very brief, the general technic for various procedures being described in one place.

The treatment is from the standpoint of the pharmacology of the various organs and physiological systems of the body, and not from that of the individual drugs.

The illustrations appear adequate, and seven colored plates designed to show graphically the action of some of the more important drugs on different systems may be especially mentioned. These will undoubtedly be highly valued by the student, who usually delights in a distinctly dogmatic treatment, but it is questionable whether they may not give a wrong impression to one entering on the subject for the first time.

There are numerous technical errors in the text. For instance, on page 22 we read, "the adult dose divided by the age plus twelve gives the dose for a child, e. g., the dose for a child of 4 years of a drug whose dose is 1 gram for an adult would be  $\frac{1}{4} + 12 = \frac{1}{4}$  gram. This is Young's rule."

It is questionable whether any laboratory manual proves entirely satisfactory for class use to others than the author. The book, however, contains a number of good points and should prove valuable as a supplement to laboratory teaching. E. K. M., Jr.

**ATLAS OF OPERATIVE GYNECOLOGY.** By Barton Cooke Hirst, M.D., Professor of Obstetrics, University of Pennsylvania. 164 Plates; 46 figures. Philadelphia and London: J. B. Lippincott Company, 1919. Price, \$7.

This book carries out well the object of the author in describing operations for conditions peculiar to women by the graphic method. The illustrations are excellent. All the usual gynecological operations are well described. The author's own technic is emphasized and is especially valuable because of his wide experience in years of practice.

One statement in connection with the surgery of the mammary gland, which he includes in this Atlas, may well be questioned is, that "the pathology and treatment of the mammary gland should be a part of every gynecologist's work." T. G. O.

**MILK.** By Paul G. Heineman, Ph.D., Director of the Laboratories of the United States Standard Serum Company, Woodworth, Wis. Octavo of 684 pages with 237 illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, \$6 net.

The subject of milk is one of particular interest to the medical profession. The book in hand is written by one who has had a long experience in a most practical way with the laboratory side of this question and therefore the author covers the question in an admirable fashion. The physician who desires to keep informed on any phase of the handling, production, or testing of milk will find this information in the pages of this work. The chemistry of milk; the adulterations of milk; the transmission of toxins and antibodies in milk; the bacteria of milk; the method of bacteriologic testing; an account of milk-borne infections; the various methods of pasteurizing and of handling this product; the regulations governing the control of milk supplies; all are fully gone into and details given which are useful to both laboratorian and clinician. The clinician will find additionally an interesting chapter on milk in its relation to infant feeding written into the book by Drs. Abt and Levinson, two of Chicago's most distinguished physicians.

In addition to the subject of milk, this writer covers the question of milk products, cheese, ice cream and ices, condensed and desiccated milk. This is just the book to have on hand to look up points that arise in every day practice. It is a good book. R. B. H. G.

**METHODE UNIVERSELLE DE FRANCAIS.** Par Joseph Heligon, Professor, St. Louis University. Published by the author. Metropolitan Building, St. Louis. Pp. 238. Price, \$3.50.

The method of the author seems to be very practical. He calls it the "mother's method." Beginning with the impressions of the ordinary objects with which one comes in contact and the ordinary acts of life, the course gradually arrives at more complex problems. Just as a child acquires abstract knowledge, so in this book the instructor proceeds from what has been learned to that which is unknown to the student. There is no attempt to translate the French language for an individual who is only acquainted with English. On the contrary, the French is brought before the pupil almost as if he did not understand any language. Quite a number of plates are inserted, in addition to the illustrations in the text. The system is unique and undoubtedly useful to persons of



education who desire to "brush up" after possessing some knowledge of the French tongue as taught in high school or college. For those who wish to prepare for a trip abroad this book is especially valuable.

R. E. S.

**PLASTIC SURGERY.** Its Principles and Practice. By John Staige Davis, Ph.B., M.D., F.A.C.S., Instructor in Clinical Surgery, Johns Hopkins University; Assistant Visiting Surgeon, Johns Hopkins Hospital, etc. 770 pages with 864 illustrations containing 1,637 figures. Philadelphia: P. Blakiston's Son & Co., 1919. Cloth, Price, \$10.

Dr. Davis has covered the field of plastic surgery in a manner never heretofore accomplished. The accepted operations in surgery are well covered and the author has put his personal imprint on many of them which his long experience amply qualifies him to do. Each chapter contains a serviceable working bibliography. The book will make a distinct addition to any surgeon's library.

A. E. H.

**DISPENSARIES, THEIR MANAGEMENT AND DEVELOPMENT.** A Book for Administrators, Public Health Workers, and All Interested in Better Medical Service for the People. By Michael M. Davis, Jr., Ph.D., Director of the Boston Dispensary, and Andrew R. Warner, M.D., Superintendent of Lakeside Hospital, Cleveland. New York: The Macmillan Company. Price, \$2.25.

The timeliness of this book is apparent to every one who has kept informed concerning the growth of dispensaries within recent years and who understands the conditions arising out of the war. In 1800 there were three dispensaries in the United States; in 1900 there were about 100 and since that date hundreds of new dispensaries have been developed while many of the old ones have been transformed. Evidently there is ample place for this medical organization "which must cover the major portion of the field in caring for disease, standing between the hospital on the one hand, which provides for the relatively small proportion of acutely incapacitated patients, and the public health department on the other hand, which deals usually with preventive work alone."

The many influences which the war has brought to bear on social and economic life and on the medical profession point to still further development of efficient dispensaries. In the preface the authors call attention to the following facts: that thousands of physicians are now accustomed to work in an organization instead of as individuals; that hundreds are being trained in specialties; and new lines of medical research are being instituted; that several million soldiers have been under systematic and adequate medical service and have learned something of its worth; that the general public and in particular the employers understand as never before the economic value of health as an element in the productive efficiency of a people. These facts make plain that there is ample room and wide need for the activities of efficient dispensaries.

A dispensary, if it is to be efficient and really serve the community to which it belongs, should not be a haphazard gathering of physicians working for private interests in the same building, but a well planned and properly administered organization giving adequate and systematic medical service to all those who need or seek treatment of disease. Such an organization, made up of many component parts and touching many phases of human life, presents various and difficult problems of administration and operation; the authors treat of these clearly and with judgment under such chapter headings as, "The Ten Essentials of a Clinic," "Medical and Administrative Organization," "Dispensary Buildings," "The Management of an Admission System," "Records and Statistics," "The Follow-Up Systems," etc. Much useful

information may be gathered from these pages, and much enlightenment.

The book is neatly printed and is neither too bulky nor too technical to make it forbidding even to the lay reader.

H. W. L.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1919, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**ALBUTANNIN.**—Tannin Albuminate Exsiccated.—A compound of tannin and albumin, thoroughly exsiccated and containing about 50 per cent. of tannic acid in combination. It was first introduced as tannalbin. The use of albutannin is based on the assumption that the tannin compound passes the stomach largely unchanged and thus the astringent action will be exercised in the intestine where the compound will be decomposed by the intestinal fluid, slowly liberating the tannic acid. Albutannin is used in diarrhea, particularly in that of children, and in phthisis.

**ALBUTANNIN-CALCO.**—A nonproprietary brand complying with the standards for albutannin. The Calco Chemical Co., New York.

**ALBUTANNIN-MERCK.**—Merck and Co. have adopted the name albutannin for the product accepted as tannin albuminate exsiccated-Merck (see Supplement to New and Nonofficial Remedies, 1919, p. 12) (*Jour. A. M. A.*, Nov. 1, 1919, p. 1363).

**ACETANNIN.**—Tannyl Acetate.—The acetic acid ester of tannin.—Acetannin was first introduced as tannigen. Acetannin is claimed to be practically nonirritant to the stomach and to pass unchanged into the intestine, there to become effective as an astringent. It is used in diarrheal affections.

**ACETANNIN-CALCO.**—A brand of acetannin complying with the standards of New and Nonofficial Remedies. The Calco Chemical Co., New York.

**ANTIPNEUMOCOCCIC SERUM, COMBINED TYPES I, II AND III—GILLILAND.**—Prepared by immunizing horses with dead and living pneumococci of the three fixed types and standardized against Type I culture. Marketed in 50 Cc. gravity injecting packages and also in 50 Cc. and 100 Cc. vial packages. The Gilliland Laboratories, Ambler, Pa. (*Jour. A. M. A.*, Nov. 8, 1919, p. 1442).

**TABLETS CINCHOPHEN-ABBOTT, 7½ GRAINS.**—Each tablet contains 7½ grains of cinchophen-Abbott. Cinchophen was first introduced as atophan and is in the U. S. Pharmacopeia as *Acidum phenylcinchoninicum*. The Abbott Laboratories, Chicago.

**ACRIFLAVINE AND PROFLAVINE.**—These are dyes derived from acridine, a base found in coal tar. Their use in medicine is proposed on the claim that they have high antiseptic power, together with comparative freedom from toxic or irritant action and without inhibiting effect on the phagocytic action of leukocytes or on the healing process. They have been used as wound antiseptics, and acriflavine has also been proposed for the treatment of gonorrhea. The reports on the value of the two preparations are contradictory and conflicting. In the treatment of wounds, solutions of 1:1,000 in physiologic sodium chloride solution are commonly recommended. In gonorrhea, a strength of 1:1,000 in physiologic sodium chloride solution is used for an injection into the urethra, and weaker solutions have been used for lavation.

**ACRIFLAVINE.**—This is 3,6 diamino acridine sulphate. For a discussion of the actions, uses and dosage, see above. Acriflavine is a brownish-red, odorless, crystalline powder, soluble in less than two parts of water and in alcohol, forming dark red solutions which fluoresce on dilution. It is nearly insoluble in ether, chloroform, liquid petrolatum, fixed oils and volatile oils.

**PROFLAVINE.**—This is 3,6 diamino acridine sulphate. For a discussion of the actions, uses and dosage, see the preceding article, Acriflavine and Proflavine. Proflavine is a reddish-brown, crystalline powder. It is soluble in water and alcohol, forming brownish solutions which fluoresce on dilution. It is nearly insoluble in ether, chloroform, liquid petrolatum, fixed oils and volatile oils (*Jour. A. M. A.*, Nov. 8, 1919, p. 1443).

**PITUITARY SOLUTION-HOLLISTER-WILSON.**—Liquor Hypophysis.—A sterilized solution of the water soluble extract of the posterior portion of pituitary glands of cattle, preserved by the addition of chlorbutanol. It is standardized according to the method of Roth and complies with the U. S. P. standard. The Hollister-Wilson Laboratories, Chicago.

**AMPOULES PITUITARY SOLUTION-HOLLISTER-WILSON** 1 Cc.—Each ampoule contains pituitary solution-Hollister-Wilson 1 Cc. (*Jour. A. M. A.*, Nov. 29, 1919, p. 1699).

### PROPAGANDA FOR REFORM

**PINOLEUM.**—A postcard advertising Pinoleum implies that Alexander Lambert, President of the American Medical Association endorses this nostrum. Dr. Lambert has never used the Pinoleum products, and protests against the dishonest method of advertising them. Pinoleum has long been advertised to the public via the medical profession. Its life history is that of the typical nostrum. Epidemics are utilized as opportunities for pushing the product. As the Pinoleum Company now misuses the name of Dr. Lambert, so it made the false use of the name of Dr. George W. McCoy, of the U. S. Public Health Service (*Jour. A. M. A.*, Nov. 1, 1919, p. 1380).

**LAVORIS.**—In recent years, Lavoris has been widely advertised as "The Ideal Oral Antiseptic," particularly to the dental profession. In 1913, a card was sent out according to which each pint of Lavoris contained zinc chloride, 1.040; resorcin, 0.520; menthol, 0.400; saccharin, 0.195; formalin, 0.195; cl. cassia zeyl., 0.780; cl. caryophyll., 0.195. Advertisements now appearing repeat the "formula," except that resorcin is omitted. The formula is indefinite and misleading in that no denomination of weight is given for the various constituents. Analysis in the A. M. A. Chemical Laboratory demonstrated that the Lavoris now sold contains no resorcin and that the zinc content is equivalent to 0.1 gm. per 100 Cc. (about  $\frac{1}{2}$  grain to the ounce). As the analysis shows that the "formula" is not only meaningless because no denomination of weight is given, but that the zinc content is inaccurate for any denomination which might be assumed, the Council on Pharmacy and Chemistry declares the composition of Lavoris essentially secret. The Council also reports that Lavoris is advertised to the public indirectly with claims that are unwarranted and objectionable from the standpoint of public safety. Further, the Council reports that the name is objectionable in that it does not indicate the composition or potent ingredients of the mixture and that the composition is irrational in that the user is likely to ascribe a false and exaggerated value to it (*Jour. A. M. A.*, Nov. 1, 1919, p. 1380).

**OLIVE OIL AS A LAXATIVE.**—In order that digestible oils may act as laxatives, it is necessary to give more than can be digested and absorbed. In the case of an infant, this may be one or more teaspoonfuls daily,

beginning with small dosages and increasing them until the desired effect is obtained. For adults, one or two tablespoonfuls may have to be given three times daily, either an hour before meals or two hours after meals. Olive oil may be taken mixed with hot milk or floating in fruit juice. Olive oil might be particularly serviceable in spastic constipation in an emaciated individual. The use of olive oil as a laxative would be contra-indicated in obesity, diabetes, gastric atony and in hypochlorhydria, as well as in those inclined to biliousness (*Jour. A. M. A.*, Nov. 8, 1919, p. 1441).

**SOME MORE MISBRANDED NOSTRUMS.**—The following preparations have been found to be misbranded under the federal Food and Drugs Act: Fruitatives, sold under the false claims that the laxative properties were due to the fruit extract; Tubbs' Bilious Man's Friend, a water-alcohol solution of sugar and plant extractives (rhubarb) with a very small amount of aromatics; Deerfield Water, consisting in part of a filthy, decomposed and putrid animal and vegetable substance; Mederine, a water-alcohol solution of sugar, potassium iodide, methyl salicylate, salicylic acid, glycerin and laxative plant extractives, and Robinson Spring Water, falsely claimed to be effective in Bright's disease, diabetes, gout, rheumatism, indigestion, etc. (*Jour. A. M. A.*, Nov. 8, 1919, p. 1458).

**ACRIFLAVINE AND PROFLAVIN.**—Tentative descriptions and standards for acriflavine and proflavine are published in New and Nonofficial Remedies for the information of manufacturers, pharmacists and physicians. In view of numerous inquiries regarding the therapeutic properties of these dyes which have been received by the Council on Pharmacy and Chemistry, the Council has prepared an abstract of the available literature on the subject. From this review, it is evident that the use of the dyes is in the experimental stage and that their value cannot be definitely judged. Of the thirty-four reports which are abstracted, twenty-five may be considered as favorable; seven are distinctly unfavorable and two are in the doubtful class (*Jour. A. M. A.*, Nov. 15, 1919, p. 1542).

**MEDINAL.**—Medinal is a proprietary name applied to barbital sodium (sodium diethylbarbiturate), the sodium salt of barbital (diethylbarbituric acid, first introduced as veronal). The Council on Pharmacy and Chemistry reports that Medinal was omitted from New and Nonofficial Remedies in 1916 because the advertising issued by Schering and Glantz (who then acted as agents for the Berman manufacturer) contained misleading and unwarranted therapeutic claims. The Council further reports that Medinal, said to be manufactured in the United States, is now marketed by Schering and Glantz, Inc., but that the claims which are made for it are still unwarranted and prevent the acceptance of it for New and Nonofficial Remedies (*Jour. A. M. A.*, Nov. 15, 1919, p. 1542).

**PHYLACOGENS.**—A circular letter devoted to singing the praises of "Pneumonia Phylacogen" contains this: "Pneumonia Phylacogen has been found to be a dependable means of preventing and treating pneumonia complications of influenza. In one large city it became a routine measure to give all persons affected with influenza an injection of Pneumonia Phylacogen as a prophylactic of pneumonia. The results were remarkable. Not only did the cases improve rapidly but in a majority of them the pneumonia did not occur." The injection of Phylacogens is simply the administration of a mixture of the filtered products of several bacterial species. The results that follow represent the reaction of the bacterial proteins—a reaction for good or evil. There is no scientific evidence to show that they possess any specific prophylactic virtue. To recommend their use in patients with influenza, as a prophylactic against pneumonia, is unwarranted; and

(Continued on advertising page xviii)



# ADVERTISERS

appreciate the statement "I saw your ad in the Journal of the Missouri State Medical Association"—Be sure you say this when you order or write for information

TRANSPARENT  
NON-ADHESIVE WATER PROOF

## SURGICAL DRESSING



Is softer, neater, more pliable and easier to handle than Gutta Percha, Oiled Silk, etc., formerly used. BE-SIDES it is TRANSPARENT and NON-ADHESIVE, and replaces those materials at a fraction of the cost.

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"Standard" (single weight) roll 9 in. x 12 ft. \$1.25  
"Standard Heavy" (double weight)..... 1.75  
"Hospital" (single weight) roll 18 in. x 12 ft. 2.25  
"Hospital Heavy" (double weight)..... 2.75

Literature and samples sent on request

MARSHALLTOWN LABORATORIES  
Department J. Marshalltown, Iowa

## Endocrine Therapy in Dysmenorrhea

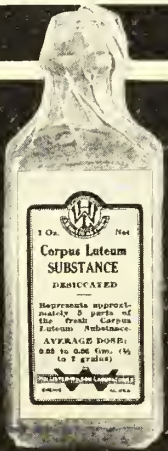
The distinct value of Corpus Luteum in the treatment of certain types of Dysmenorrhea is conceded. Results are in direct proportion to the activity and uniformity of the preparation used. Clinical trial is the best evidence in favor of our product.

### The reasons why

- made from absolutely fresh material
- careful hand dissection
- elimination of abnormal glands
- original methods of manufacture and preservation

Physicians will be interested in our catalog describing many products—now ready for mailing.

The January issue of *The Autacoid and Suture* is now ready. Send us your name and address for a copy.



HOLLISTER-WILSON LABORATORIES

4221 So. Western Boulevard,

Chicago

(Continued from page 48)

the physician who acts on the advice of the manufacturer must assume the responsibility of the results. In case of mishap, he cannot fall back on the manufacturer. He will find no scientific evidence to support him (*Jour. A. M. A.*, Nov. 15, 1919, p. 1442).

**VACCINES IN INFLUENZA.**—The efficacy of vaccines in preventing influenza or of preventing or decreasing the severity of secondary infections is unproved. In view of the varying preponderance of the different organisms isolated from influenza cases, it is evident that even if a certain mixture is found efficacious in one locality, it may not be effective in another. Thus far, hope and imagination have exceeded scientifically controlled facts. Many vaccines come highly recommended by their manufacturers; but very little dependable evidence is submitted to show how much, if at all, the patient will profit therefrom (*Jour. A. M. A.*, Nov. 15, 1919, p. 1544).

**THE ELI PRODUCTS OF ELI H. DUNN.**—Physicians are receiving advertising matter from a concern that seems to operate under various names, such as "E. H. Dunn and Co.," "Eli H. Dunn," "Eli Laboratory," etc. The concern is located in Kansas City, Mo. It advertises "Eli 606 Capsules," "Eli Vaginal Capsules," "Eli 'Vim' Restorative," and an intravenous nostrum, "Ampules Eli Venhydrarsen." "Dun's Intravenous and Restorative Treatment" is advised for the treatment of hysteria, and a price to the patient of \$300 is suggested. The gross commercialism that permeates the advertising again illustrates the fact that the fad for intravenous medication offers an attractive field for those who would exploit our profession (*Jour. A. M. A.*, Nov. 22, 1919, p. 1628).

**COTARNIN SALTS (STYPTICIN AND STYPTOL).**—The Council on Pharmacy and Chemistry announces the omission of cotarnin salts (Stypticin and Styptol) from New and Nonofficial Remedies. Salts of the base cotarnin have been used as local and systemic hemostatics. The hydrochloride was first introduced as "Stypticin" and is now in the Pharmacopoeia as cotarnin hydrochloride. The phthallic acid salt of cotarnin—cotarnin phthallate—was introduced as "Styptol." In 1918, Stypticin was omitted from New and Nonofficial Remedies because the former American agents were no longer offering it for sale. Styptol was retained and is described in N. N. R., 1919. As was pointed out in the description (N. N. R., 1919.), the evidence for the usefulness of the cotarnin salts has been contradictory and unsatisfactory. Now P. J. Hanzlik has made a thorough investigation of the efficiency of hemostatics and has shown the inefficiency of cotarnin salts. The evidence was so definite that the Council has directed the omission of the general article on cotarin salts and the description of Styptol from New and Nonofficial Remedies (*Jour. A. M. A.*, Nov. 22, 1919, p. 1628).

**URI-NA TEST.**—The Uri-Na Test, sold by the Standard Appliance Co., Philadelphia, bears a strong family resemblance to Capell's Uroluetie Test. Both are said to permit the detection of syphilis by an examination of urine. There is no method known at the present time by which the absence or presence of syphilis can be determined by a simple color test of the urine (*Jour. A. M. A.*, Nov. 22, 1919, p. 1630).

**MICAJAH'S WAFERS AND MICAJAH'S SUPPOSITORIES.**—The Council on Pharmacy and Chemistry reports that "Micajah's Medicated Wafers" (formerly called

(Concluded on page xx)

## BENZYL BENZOATE

THE ORIGINAL

### USABLE SOLUTION

Benzyl Benzoate Miscible, H. W. & D.  
Supplied in 2 fluid ounce bottles.

## NEW ANTISPASMODIC

Safe, Non-narcotic

May be successfully used instead of opium and its derivatives in all spasmodic conditions of the smooth muscles.

*Circulars Upon Request*

**HYNSON, WESTCOTT & DUNNING**

## USE SHERMAN'S Bacterial Vaccines

TO

Protect Your Patients

AGAINST

**COLDS INFLUENZA  
PNEUMONIA**

WRITE FOR LITERATURE

MANUFACTURER  
OF  
BACTERIAL VACCINES

**G. H. SHERMAN, M.D.**  
Detroit, Mich.  
U.S.A.



# Stanolind

Reg. U. S. Pat. Off.

# Surgical Wax

For use in the hot wax treatment of burns, surgical wounds and similar lesions.

It is unapproached in purity and may be applied without incorporating with it any therapeutic agent.

Many advanced workers advocate its use in that manner.

However, surgeons may use it as a base for any of the published formulas, and may be assured that it is the purest and best wax that modern science can produce.

It conforms to the requirements of the Council of Pharmacy and Chemistry of the American Medical Association.

## Stanolind Petrolatum

### *In Five Grades*

"Superla White" is pure, pearly white, all pigmentation being removed by thorough and repeated filtering.

"Ivory White," not so white as Superla, but compares favorably with grades usually sold as white petrolatum.

"Onyx," well suited as a base for white ointments, where absolute purity of color is not necessary.

"Topaz" (a clear topaz bronze) has no counterpart—lighter than amber—darker than cream.

"Amber" compares in color with the commercial grades sold as extra amber—somewhat lighter than the ordinary petrolatums put up under this grade name.

## STANDARD OIL COMPANY

(Indiana)

*Manufacturers of Medicinal Products from Petroleum*

910 S. Michigan Avenue

Chicago, U. S. A.

(Continued from page xviii)

"Micajah's Medicated Uterine Wafers") and "Micajah's Suppositories," sold by Micajah and Co., Warren, Pa., are inadmissible to New and Nonofficial Remedies because: (1) Their composition is essentially secret; (2) the name of neither of these mixtures is indicative of its composition; (3) of unwarranted and exaggerated therapeutic claims, and (4) the therapeutic advice which accompanies the trade packages constitutes an indirect advertisement to the public. The "wafers" were analyzed in the A. M. A. Chemical Laboratory in 1910 and found to consist essentially of dried ("burnt") alum, boric acid and borax. The suppositories were recently examined in the A. M. A. Chemical Laboratory and, like the "wafers," were found to contain alum, boric acid and borax—and these substances practically alone—incorporated in cocoa butter. The company claims that "to these have been added Ammonii Ichthyosulphonate, Balsam of Peru, Ext. Belladonnae." The A. M. A. chemists report, however, that if extract of belladonna is present at all, it is in amounts too small to be detected by the methods commonly employed in the chemical examination of alkaloidal drugs.

The chemists report further that while ammonium ichthyosulphonate and balsam of Peru both have a decided odor and a dark color, the suppositories have but little color, and the odor of cocoa butter which forms their base is not covered by these drugs. Obviously, therefore, if ammonium ichthyosulphonate and balsam of Peru are present at all, the amounts are utterly insufficient to exert any therapeutic effect (*Jour. A. M. A.*, Nov. 29, 1919, p. 1715).

### WE GROW

The Abbott Laboratories of Chicago have been using half page space in our JOURNAL but their success warrants them in using a full page at this time, and our readers will find their full page announcement in this issue. This evidence that the readers of the JOURNAL are careful to patronize our advertisers is gratifying, and is a tribute to the policy which this JOURNAL long since adopted of advertising only such medical products as have been accepted by the Council on Pharmacy and Chemistry. We want our readers to know that this JOURNAL protects them; as a consequence they may unhesitatingly purchase the products which are advertised in this publication.

In answering the Abbott advertisement please use the coupon attached to the page advertisement so your JOURNAL will receive credit for the inquiry.

## COMMERCIAL ANNOUNCEMENTS

Rate \$1.50 per insertion for fifty words. Remittance must accompany order. Journal Mo. S. M. A., 3529 Pine St., St. Louis.

**THE STUDENTS' LIBRARY ASSOCIATION OF THE MIDDLESEX College of Medicine and Surgery** solicits donations of Medical and Scientific libraries, Medical books, bound and unbound volumes of back numbers of Medical and Scientific Magazines, and funds for current American and foreign Medical Journals. Jennie Hrabá, Class '21, Association Secretary. University of Massachusetts School of Medicine, East Cambridge, Mass.

**FOR SALE—A BETZ X-RAY MACHINE FOR \$125.00.** NEW tube, never been uncrated, cost \$43.50, for \$20.00. Goods to be shipped from Eldorado Springs, Mo. Address Dr. J. E. Dunaway, Stanchfield, Minn.

**FOR SALE—PRACTICE IN SOUTHWEST MISSOURI TOWN.** Population 5,000. Will sell up-to-date office equipment; price, \$600. Reason for selling, desire to go West. Address R. R., care The Journal.

**For Sale—UPRIGHT AUTOCLAVE. NICKEL PLATED, ELECTRICALLY HEATED, 110 volt, 11 in. x 24 in. inside dimensions.** Equipped with hinged, ground joint lid, safety valve steam gauge. Thermometer and Pet Cock for releasing air. Guaranteed to be as good as new. Price \$100.00. Address X D. F., care The Journal.

**MEDICAL BOOK SALESMEN—UNUSUAL OPPORTUNITY;** new books being published; desirable exclusive territory now available. P. Blakiston's Son & Co., Publishers, 1012 Walnut Street, Philadelphia.

**FOR SALE—ONE 10 K. W. TRANSFORMER TYPE X-RAY machine with Coolidge control. A bargain.** Address X R 4, care The Journal.

**WANTED—A SLIGHTLY USED GLASS SURGICAL CASE,** steel frame and legs. Must be in good condition. Address Dr. F. W. Trauernicht, 202 Commercial Building, St. Louis.

**GRADUATE NURSE—POSITION IN PHYSICIAN'S OFFICE.** Can do X-ray work, some laboratory work, and trained in giving anesthetics. Address H. J., care The Journal.

**USE THIS COLUMN TO SELL OR EXCHANGE EQUIPMENT,** to find locations, dispose of your practice, etc. Rate, \$1.50 per insertion for fifty words, paid in advance.

### The Trowbridge Training School

A home school for nervous and backward children.  
Special arrangements for day pupils.

E. HAYDN TROWBRIDGE, M.D.

Rialto Building, KANSAS CITY, MO.

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For Sale at Your Dealer. Made in 5 grades.  
Conceded to be the Finest Pencil Made for General Use.

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## Washington University School of Medicine ST. LOUIS

**Integral part of Washington University** continuing the work of the St. Louis Medical College (founded 1848) and the Missouri Medical College (founded 1843).

**Whole time Staffs** in Clinical and Laboratory Departments.

**Laboratories, Dispensary and Hospitals** forming a united group of eight large buildings, completed in 1914, are located opposite Forest Park.

**Facilities for Clinical Study** afforded by Washington University Dispensary (117,812 visits in 1918); Barnes' Hospital (220 beds); St. Louis Children's Hospital (160 beds); City Hospital and Infectious Hospital (available approximately 375 beds).

**Library** of the School of Medicine contains 27,000 bound volumes and receives 414 selected journals.

**Men and Women** admitted on same terms. Students in schools offering only first two years can enter with advanced standing. Provisions for graduate study and investigation in all departments.

**Catalogue and Detailed Information** may be obtained by application to the Dean of the Washington University School of Medicine, Euclid Avenue and Kingshighway, St. Louis.

## FREE — 1920 — FREE APPOINTMENT BOOK AND DESK CALENDAR

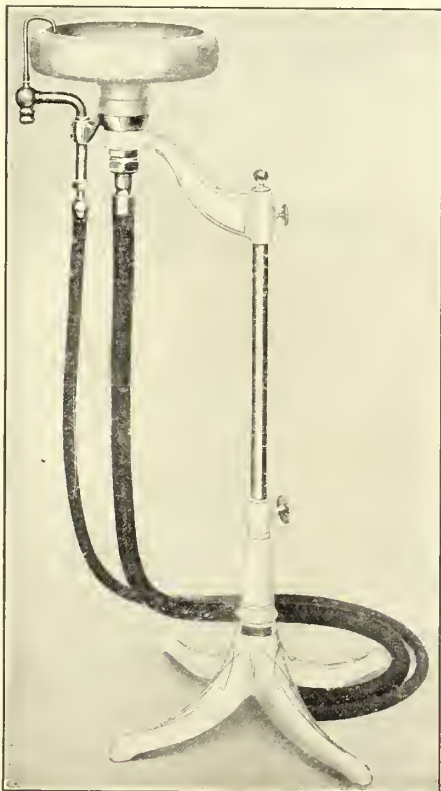
A very practical and useful article for the PHYSICIAN, DENTIST  
or NURSE.

Perfectly indexed for every day in the year and every half hour of  
the day.

Let us send you one with your next order.

*ONE TO A CUSTOMER. WRITE FOR CATALOGUES.*

**FRANK S. BETZ CO., Hammond, Indiana**



## CLARK No. 25

### SINGLE BOWL FOUNTAIN CUSPIDOR

WHITE ENAMEL WITH GREEN  
BOWL AND TUBING.

PRICE - - - - - \$50.00

PRICE BLACK ENAMEL - 45.00

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HOUSTON  
SAN ANTONIO  
OKLAHOMA CITY

*"Satisfactory R. Work for more than 27 Years"*

## STRIKES AND PUTTS

The federal government has given \$3,000 and the county court of Jasper County agreed to contribute a similar amount toward a health survey by the United States Public Health Service of a part of Jasper County. The government gave its share to the service but the county court has paid only part of its obligation. Now the court says it cannot complete its bargain. Too bad the word of a county court is not "as good as its bond."

A Harvard professor says that air, sunlight and water are the only elements needed for the production of nutritious food and he proposes to find a method of making it synthetically. Plants, he says, are his principal competitors because they do not need any expensive apparatus for the purpose.

Kansas will have to go some to erect, endow and put into operation the "strongest medical school in the West" at Rosedale if she gets ahead of Washington University or the St. Louis University when the Campbell millions are available. But you never can tell. Kansas does some surprising things now and then.

Well, anyhow, we have not seen the names of any doctors among the "also rans" who were fleeced by the race-course swindlers in St. Louis.

IS THE CALORY RED, TOO?

*St. Louis Post-Dispatch*

A defender of the cranberry says that it is a fine antiscorbutic. It tastes just that way! And there might even be a calory in it. T. K. H.

The cranberry serves its purpose as a part of the color scheme, like a red necktie.

A GROUCH

"I never knew the man you see yonder to treat anybody well." "What's the matter with him?" "He has to treat them ill. He's a doctor."—*Baltimore American*.

THE SHIMMY

*Dr. E. D. Twyman, Kansas City*

A doctor of San Francisco writes anent the recent severe earthquake (not much press report on it) that he found he had tied his wagon to a "shimmying" star.

SOME ROAD

*St. Louis Post-Dispatch*

Echo of the bad roads movement in Missouri from the *Ralls County Record*: "Dr. Waters went over near Busch, Sunday, to look after some smallpox cases, and on his way home, when passing over some of the real good roads in that vicinity, had the misfortune to have his buggy and horse turn over in one of the 'sidling places.' His buggy was wrecked, he was badly scratched, his horse was lying on his back kicking up his heels, and the dickens was played generally for a short time. Fortunately, no one was seriously hurt."

## The "KNUKLFIT"

*The "Glove with the Hump"*



### ELIMINATES

- tension on finger joints;
- cramping of fingers or hand;
- wrinkles and folds in glove fingers

### DOES NOT

- deadened sense of touch in finger tips;
- retard finger action;
- interfere with circulation of blood in fingers or hand.

*In light, medium, heavy, extra heavy and Reinforced wrists, smooth or rough.*

**HETTINGER BROS. MFG. CO.**

**Kansas City, Missouri**

A SCIENTIFIC staff, composed of physicians and physiological, biological, pharmaceutical and analytical chemists, has been created by these laboratories. Each man is a specialist in his own particular field and many of them are scientists of distinction. We believe that the personnel of this staff is unexcelled by that of any manufacturing pharmaceutical house.

We offer the professional services of these gentlemen to medical men. Any questions along the lines of their endeavor will be gladly answered. In addition to the research work, which is being carried on in various branches of science, our staff is abundantly able to give physicians practical suggestions in all that relates to lues and its treatment.

Correspondence with physicians is invited and will be welcome as we are anxious to demonstrate our desire to cooperate with them in every possible way.

**H. A. Metz Laboratories, Inc.,**

**122 Hudson Street,  
NEW YORK**



# THE JOURNAL

OF THE

## Missouri State Medical Association

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### ORIGINAL ARTICLES

#### PREVENTIVE MEDICINE AND WAR\*

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It has long been recognized that the microbial diseases inflict greater losses on armies than the bullets and shrapnel of the foe. In the Crimean War the French lost more than 75,000 men by disease while only 10,240 fell in battle and about the same number succumbed later to wounds. In our Civil War 97,000 were killed against 184,000 who died of disease. In the Spanish-American War disease proved fourteen times more fatal than battle. Such instances could be multiplied.

It is yet too early to give final figures for the Great War, but the drafting and training periods, during which preventive medicine had its golden opportunity, have passed and the results to date bear much of interest as well as profit. The proper evaluation of many measures has been made difficult by untoward circumstances and the exigencies of military necessity. A machine should be strong enough to do the heaviest work required, a bridge stable enough to bear the heaviest load and still have a margin of safety. It is not entirely just to compare preventive medicine to such material things in which strength of elements used in construction as well as the loads and stresses can be accurately measured and provided for. It is fair, however, to expect that it should be able to meet the requirements of any emergency. This paper is an attempt to review its successes and failures in the American Army, 1917-1918.

During the war the United States has raised and trained the greatest army in its history. Never before has there been such an opportunity to study the efficacy of our modern methods on such numbers of men. The draft-

ing is now over, intensive training is past, and we can take account of what has been accomplished. Demobilization has its problems for the sanitarian which are of somewhat different character and can be considered later.

We know from past experience that the gathering together of large bodies of men means an increase in epidemic diseases and also the death rate. Our own experience in the Spanish-American War is too recent for us to have forgotten. During a draft men are gathered in large numbers from every part of the country and sent to camps where they at once enter a mode of living entirely new to them. If epidemic diseases are prevalent in any of the localities from which the men are drawn, carriers or cases in the incubative stage will almost certainly be brought in. The men in camps live in a closer relation to their fellows, and in more crowded quarters than most of them have ever known before. The close contact is more continuous than in any walk of civil life. The result will be affected by the extent of the area from which the men are drawn, and by their susceptibility to the diseases existing in those areas. The men exposed for perhaps the first time to diseases not prevalent in their home district will be more susceptible than others, and the death rate will probably be higher.

In the assembling and training of our army the urgent necessity for haste brought about the neglect or overruling of some well considered measures, which doubtless added to our sick and death rates. It had been foreseen that the respiratory diseases would be those most to be feared, and in the designs for barracks 45 square feet of floor space and 500 cubic feet of air space had been insisted upon. However, many of the camps were occupied before completion and in practically all camps there was overcrowding for considerable periods, coupled with shortage of clothing and blankets. Without doubt these conditions increased the ravages of the respiratory diseases.

As an example of the overcrowding, the plans of the Quartermaster-General's Office called for barracks which allowed only 338 cubic feet per

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man. The rooms were large and were occupied by as high as 140 men closely packed together. The newer barracks are planned to house not more than 34 men per room and the rooms are not connected.

In the ten camps the conditions were not much better. The War Department planned to put 12 men to a tent, the number to be decreased to 9 as more tents became available. Most of these tents were 16 feet square, though some of the round tents were in use and these gave even less space. Five men per tent gave approximately 50 square feet of floor space per man, and it was recommended that this number be the limit, but it was often impossible to carry this out owing to shortage of tents. The result was bad. When combined with lack of clothing and bedding the men huddled together in the vain effort to keep warm, while ventilation was cut off as far as possible.

The physical examinations were done on a scale much larger than most of the examiners had ever seen before, and the military necessity was such that the examiners were often required to make more examinations in a given time than they could accomplish with proper care. Especially in the early days the examinations were done under extreme pressure, in unsuitable buildings or tents, and by a hastily assembled and frequently changing personnel. It goes without saying that under these conditions there were failures to detect men with diseases or defects which should have caused their rejection. While these conditions probably led to some increase in the sick rate, the work of the medical officers was well done under trying circumstances and the profession has good reasons to be proud of the record it has made.

#### TYPHOID FEVER

The intestinal diseases have always played a large part in the sickness and death rate of armies. Our own experience in the Spanish-American War, when we had 20,000 cases of typhoid, is too recent to have escaped our memory. The typhoid rate was 141 per 1,000 and the death rate 14 per 1,000. If this rate had prevailed in the present war there would have been 141,000 cases and 14,000 deaths for each million men. Between Sept. 1, 1917, and April 18, 1919, there were in the United States 447 cases of typhoid and 45 of paratyphoid with 50 deaths. In the American Expeditionary Force between Oct. 18, 1917, and April 11, 1919, there were 1,410 cases of typhoid, and 270 cases of paratyphoid, with 154 deaths. Most of these cases have occurred since July 1, 1918. It appears that each heavy offensive gave a number of typhoid cases, 300 being attributed to the Argonne alone.

Vaccination against typhoid, the value of which was shown by Sir Almroth Wright, was

introduced into our army in 1909 as a voluntary measure but made compulsory in 1911. Until recently a watery suspension of the typhoid germ alone was used, given in three injections. When our troops were sent to the Mexican border, paratyphoids A and B were also given, at first separately but since August, 1917, combined with the typhoid as a triple vaccine. This has now been replaced by the lipovaccine in which the three are combined in oil and given in one injection instead of the three at first required for the typhoid as well as the paratyphoid, making six in all, which were a tax alike on the time and endurance of the men.

The practical elimination of typhoid from the army has been considered one of the great triumphs of preventive medicine. While the figures just given are somewhat disappointing at first sight, it is evident that there is no reason for discouragement to be found in them. Among the troops in this country typhoid has fallen to an almost negligible figure. In Europe our men have been exposed to the extremes of fatigue and it has been impossible to carry out sanitary measures to the full. All our soldiers were supposed to have the antityphoid vaccination, which has proved so wonderfully successful, but in some the immunity has been broken down by the conditions of life or massive infection or both, and there is evidence that of the cases occurring in France up to July, 1918, many had escaped vaccination.

#### MEASLES

Measles has been the bugbear of the sanitarian. Its prevalence is apparently uninfluenced by those sanitary measures which have proved so efficient in the control of many other diseases. The prevalent ideas of its harmlessness make preventive measures difficult to carry out in civil life. It is the most common of the infectious diseases in army camps. While its chief importance has usually been considered to lie in the great number of men incapacitated and the consequent loss of time, during this war it has frequently preceded pneumonia in a number of the camps, apparently bearing the relation of cause to effect. Pneumonia following measles is very fatal, running to 45 per cent. mortality. During the first year of the war, on account of the serious complications and sequelae, it proved the most important of all diseases. The germ is unknown. It is believed to be generally spread by the secretions of the upper respiratory tract and to be received through the same channels. In spite of a few statements to the contrary we have not yet been able to control the spread of measles to any extent. It is doubtful if any of the measures taken lessened the incidence of measles to any appreciable degree. No vaccine is possible until more is known about the causative organ-



ism. In this disease preventive medicine works without the best guides, and the best that can be said is that it has not achieved any marked success.

#### THE PNEUMONIAS

Pneumonia has always exacted a large toll from armies. During the present war it has proven the preeminent medical problem, having been responsible for at least 65 per cent. of all deaths in the army in this country during 1917.

Primary lobar pneumonia of all single diseases caused the greatest number of deaths. Bronchopneumonia was by far the most frequent complication of measles and influenza. Taking these into consideration the pneumonias have been far in the lead of all other diseases as causes of death.

The writer once heard Sir William Osler say that he doubted if we cured any more cases of pneumonia today than were cured in the days of Hippocrates. This was said about 1905. He would probably not be willing to repeat this statement today, though all must recognize the insufficiency of most of the curative measures proposed and practiced. Going no further back than our Civil War, fifty-six years ago, we find that the case mortality for 1917-1918 has been reduced from that period by about one-fourth. It must be borne in mind, however, that differentiation and diagnosis are more exact today, the term "inflammation of the lungs" covering those cases during the Civil War which are referred to now as pneumonia.

A comparison of the admission rate for the first six months of the Civil War with that of the present war shows that for the same number of soldiers there were 1,471 more admissions for pneumonia in that war than this. Correct and entirely comparable figures can not be obtained at this time, and at best the comparison will not be exact. It appears, however, that we have made some progress in the prevention of pneumonia along sanitary lines.

Prevention by protective inoculation has been markedly successful where tried. The pneumonias are now classified both anatomically and according to the causative organism. Type IV still baffles us, but a vaccine against Types I, II and III is available and has been used with marked success. Lister, in South Africa, seems to have been the first to prove the efficacy of vaccine against pneumonia. At Camp Upton a saline vaccine of Types I, II and III was given to 12,519 men, approximately 40 per cent. of the camp strength. Among the vaccinated no case of pneumonia of Types I, II and III were seen during ten weeks of observation, while among the unvaccinated there were 26 cases of these types. Considering pneumonia of all types, 17 cases were seen in the vaccinated against 173 in the unvaccinated.

At Camp Wheeler 13,460 men, approximately 80 per cent. of the strength, were vaccinated with lipovaccine. During the time the men were under observation following the vaccination there were 32 cases of pneumonia, Types I, II and III, among the vaccinated (80 per cent.), and 42 cases among the unvaccinated (20 per cent.).

Of all types of pneumonia there were 363 among the vaccinated and 327 among the unvaccinated. In other words, the incidence was about the same in the two groups, but the vaccinated group represented 80 per cent. and the unvaccinated only 20 per cent. of the total. The most striking results are obtained in seasoned men, among whom the pneumonia incidence was almost seven times as great in the unvaccinated as in the vaccinated.

The death rate appears also to have been very favorably influenced. Of 155 cases of pneumonia (all types) in vaccinated men the death rate was 12.2 per cent. while for 327 cases in unvaccinated men it was 22.3 per cent. In primary pneumonia the death rate in vaccinated and unvaccinated was 11.9 per cent. against 31.8 per cent.

The vaccine is now manufactured entirely in the form of lipovaccine, the method having been perfected at the Army Medical School. Extensive study of its use in industrial centers is proposed, and there seems good reason to look forward to a great reduction in the number of deaths from this dreadful disease.

#### EPIDEMIC CEREBROSPINAL MENINGITIS

While the total number of cases was small compared to any of the other epidemic diseases, this disease is notable because of all it had the highest mortality rate, and its incidence shows the greatest excess over that of civilian communities. Vaughan and Palmer estimate that it is forty-five times more prevalent in the army than in civil life. It is particularly easy to introduce into a camp because of the prevalence of carriers and the lack of precautions against them. When endemic in any community a draft is certain to include some carriers. In two of the camps which had the greatest number of cases the disease occurred among the workmen before or during the assembling of the draft. From Camp Funston, which had troops from two states in which the disease has been endemic for several years, it apparently was spread to Camp Pike by a contingent, and from Camp Pike to Beauregard in the same manner. The disease when declared was controlled by isolation and search for carriers, but it seems evident that had the incoming men been examined and carriers isolated the outbreak which took place might have been prevented. The incomplete condition of the camps on occupation made it difficult or impossible to carry out

some measures of prevention in the early days. In some camps an attempt was made to spray the throats of contacts with a solution of dichloramin-T but, at least as carried out, its value was a matter of great question.

#### MUMPS

Although usually classed as a disease of childhood, mumps is one of the most prevalent of all diseases in army camps. Its importance lies chiefly in loss of time. In this respect it ranked high in this country, while in the overseas troops it took first place. In fact mumps was twice as prevalent among the troops in Europe as among those in this country. The long incubation, ten to twenty days, makes the isolation of contacts a difficult measure to carry out. It is also practically impossible to isolate convalescent cases for anything like the period (six weeks) necessary to insure entire safety. Serious complications are so rare comparatively that the prolonged isolation appears unduly burdensome.

During the early days of mobilization some attempts were made at prevention, but these were largely abandoned later on orders from Washington. It frequently happened that cases still in an infective condition were returned from the hospital while contacts with the same case were kept in isolation. In view of the relaxation in preventive measures and the opportunities of contact to which the troops in the training camps were subjected, the greater prevalence among the men after reaching Europe is not entirely clear.

Comparison with the Civil War is not favorable. Mumps was more prevalent during the training period of our present army than in the corresponding period of the Civil War. In this disease preventive measures known to us are available and effective, but the disadvantages of carrying them out seem to outweigh the advantages. When the civil population around a camp is infected and liberty days are granted preventive measures seem especially futile. Preventive medicine in this disease cannot claim a success for the present war.

The factor which apparently influenced the incidence of the disease most was the home place of the troops. Those from cities and densely populated areas suffered least, while those from thinly populated rural districts most. In other words, the incidence of mumps was determined by whether or not immunity had been established during childhood.

#### SCARLET FEVER

Scarlet fever did not prevail to any extent. In total number of cases, deaths and noneffective rate, it played a small part. In only two camps did it assume anything like epidemic proportions. In a few others small localized out-

breaks occurred which were readily controlled and soon terminated. It is not one of the highly contagious diseases, especially among adults. Owing to this in part and to the number of non-susceptibles, preventive measures were successfully and easily carried out.

#### DIPHTHERIA

This disease was a minor problem in the Army. Up to July 1, 1918, it had occurred in only seven camps. In no camp did an epidemic threaten. Serum treatment limited the number of deaths, while culture of contacts and isolation limited the number of cases.

#### INFLUENZA

Any one interested in preventive measures and wishing to demonstrate the efficiency of modern methods would be glad to pass this disease in silence. A rather mild infection, generally considered influenza, became epidemic in many camps in the spring of 1918. On the Pacific Coast it was known as "Jap Fever," its supposed origin being a Japanese warship which visited the ports of that coast. The same disease was, however, seen in epidemic form in a number of camps about the same time. It was reported as far east as Oglethorpe, Ga., in March, and there is no ground for attributing its introduction to the Japanese warship. During this epidemic the proportion of men affected was small, about 5 per cent, the death rate low, and the outbreak subsided rapidly. If cases continued to appear during the summer they attracted little attention.

Reports both official and in the daily papers show that influenza was seen on a number of ships and transports entering our eastern and southern ports during the entire summer and patients were transferred from them to hospitals. A considerable number of cases of fatal pneumonia occurred. One ship from Liverpool, the Exeter, arrived at Philadelphia June 22 and reported that twenty-seven of the crew and the quartermaster were ill with pneumonia. Another ship, the Bergensford, which reached New York August 12, had 200 cases of influenza during the voyage. There was therefore abundant opportunity for the virulent type of influenza seen later to be imported. Whether or not it was so imported, or whether the type seen during the spring in some way became exceedingly virulent, has not been and probably never will be determined.

The epidemic of the fall of 1918 is fresh in the memory of everyone. It will always be a notable event in medical annals, comparable to the historical plagues of the past, which we are in the habit of connecting with the dark ages of medicine. Beginning at Camp Devens, Ayer, Mass., on or about September 7, though not reported as epidemic until September 16, it



spread with explosive rapidity over the entire country, in civil communities and camps alike. From September 12 to 30, inclusive, thirty-one camps were invaded. The percentage of troops attacked varied largely without apparent reason, running in Camp Cody to 49.8 per cent., and in twenty-one camps to above 20 per cent. The proportion of cases which developed pneumonia as well as the death rate from pneumonia varied greatly for reasons equally not apparent. The variations are too great to be accounted for by differences in diagnosis, though this possibly is a partial explanation. Several camps which reported extremely low pneumonia rates had excessively high death rates from pneumonia, one going to 89.9 per cent. Camp Sherman, which had a very high pneumonia rate also had an excessively high death rate from pneumonia. No rule is of general application.

From Sept. 1, 1917, to March 28, 1919, for troops in America, and Oct. 18, 1917, to March 28, 1919, for those in France, there were reported 1,384 deaths from influenza and 39,493 from pneumonia. In the United States between Sept. 21, 1918, and April 25, 1919, there were reported 350,666 cases of influenza. For the same period there were 65,076 cases of pneumonia, 22,102 deaths from pneumonia, 1,184 deaths from influenza and 145 deaths from empyema. More exact figures will not be available for several months, but it can be said positively that the great majority of these deaths were the result of influenza. They are enough surely to demonstrate the ravages of this epidemic and our lack of control over it.

In reviewing the epidemic we may well ask whether or not preventive measures had any influence. Some of us who were in camps which fared well, comparatively, like to believe that what we did lessened the spread of the disease and saved lives. I have been convinced that in Camp Kearney, for example, the rapidity of spread at least was controlled, obviating the necessity of any emergency measures and ensuring the best care to each case. In many camps all efforts at control seemed to be entirely without effect. A well known epidemiologist, with whom the matter was discussed, said in effect, "Do not flatter yourself that what you did had any effect, — if you came out well, you played in luck, that is all there is to it." The markedly irregular distribution of the epidemic in cities, with the apparent immunity of some areas, while the contiguous areas would be hard hit, bear out this opinion. On the other hand, the absolute exclusion of the disease from the training station on Goat Island seems to prove the efficacy of preventive measures.

At best we must admit that no measures adopted controlled the course of the pandemic. It spread with lightning like speed, went where it listed, and ceased its ravages only when avail-

able material was exhausted. If any preventive measures prevailed they were local. We must confess that on the whole we made a dismal failure in our attempts to control the spread of influenza.

In spite of the fact that the causative organism is not positively known, many eminent men believing that it is entirely unknown, bacterial vaccines have flooded the country, most of them built up on the shotgun prescription plan. Observations without control have convinced some men of their value. Never has the fallacy of "post hoc, ergo propter hoc" been more strikingly shown. When tried under exact conditions in which equal numbers of persons living under the same conditions and subject to the same exposure have been vaccinated, even those most exploited have failed utterly. A famous physician in discussing new and popular remedies once said: "Be sure to use them while they are still doing good." Some manufacturers will continue to exploit these vaccines and some physicians will continue to use them, but in general they will cease to do good.

For the pneumonia which has been the chief if not the only cause of death in influenza, the lipovaccine mentioned in speaking of pneumonia affords an efficacious preventive.

#### INSECT BORNE DISEASES

In this country malarial fever is the only strictly insect-borne disease to which our troops have been exposed. Many of the men have come from malarial districts in which both human carriers as well as the mosquito host abounded. The Malarial Register of the Army makes it possible to keep track of patients and to insure continuous treatment, which cannot be done in civil life. By draining, oiling, screening and other antimalarial measures, both in the camps and in the extra-cantonment zones, the malarial fevers have been reduced to a minimum and their spread controlled.

In 1861-1865 nothing was known of the relation of the *Anopheles* to malarial fever. Comparing the first six months of the Civil War, July to December, 1861, with the same months of 1917, we had only one case of malarial fever for every ninety-three in 1861. Since there is no vaccine against malarial fever this result is due almost entirely to sanitary measures.

Typhoid fever and the intestinal diseases diarrhea and dysentery are also considered, in part at least, as insect borne. The reduction in typhoid has already been pointed out.

Dysentery and diarrhea have also been greatly reduced. Again using the first six months of the Civil War for comparison the incidence of these diseases has been as one to twenty-two. This has been brought about by good water supplies, sewer systems, the proper disposal of excreta and persistent antityfly campaigns.

Typhus fever and the newly worked out disease known as trench fever, both transmitted by the louse, have not been prevalent in the American armies.

Diseases borne by insects, and especially those in which a host relationship exists between the insect and the causative parasite, are particularly susceptible of control, and give preventive medicine some of its brilliant conquests.

#### SUMMARY

Even under the disadvantages of assembling in a short time a huge army, for which inadequate provisions in housing, clothing and bedding had been made, the results show a marked advance over those of the Civil and Spanish-American Wars. While the Army was being assembled the medical personnel was also in process of formation, made up of men drawn from civil life to most of whom the handling of large bodies of men was new, and whose training had been directed toward the treatment and care of the sick rather than to the great questions of prevention. The medical corps of the Regular Army was small and with very few exceptions the officers had never been called on to deal with problems of a magnitude at all approaching those which constantly presented themselves. Most of the failures and shortcomings were due not so much to faulty principles as to the difficulty or impossibility of applying those principles in practice under existing conditions. Some of these difficulties are inherent to the assembling of large bodies of men on an emergency call; some are capable of betterment.

Comparison of the army morbidity and mortality rate with that of the same age period in civil life is not encouraging on the whole. Typhoid fever, diarrhea, dysentery, smallpox and malaria have been almost banished from the army. Some other diseases are much less common in the army largely because of exclusion by the physical examinations on entrance, such as tuberculosis, cancer, epilepsy, and diseases of the heart and circulation. Against these there are a number of acute contagious diseases which were much more common among soldiers, and which our present methods of assembling, travel, examinations and housing tend to increase. Among these are measles, meningitis, pneumonia, broncho and lobar, scarlet fever, and influenza. In other words, we have not been able to control those diseases spread by the secretions of the respiratory tract, and which probably invade the body through the same channels. In this fact lies the greatest weakness of the army defense against disease and death by disease. This group had caused more than 75 per cent. of the deaths from disease even before influenza became epidemic. When final figures are available the comparative im-

portance of these diseases, and also our failure to control them, will be even more clearly shown.

One fact stands out, that the young man entering the army, although he belongs to a physically select class, is in much greater danger of illness and death than the man of the same age in civil life. The large roomed barrack must go.

It is difficult to leave this subject without a protest against the American habits of promiscuous spitting and of using saliva as a universal moistener, and also of the general neglect to cover the mouth and nose when coughing or sneezing. There is literally no limit to the promiscuous interchange of spit in our daily intercourse with our fellow men.

In barracks, mess halls, during religious services as well as entertainments, even those held in the open air, there was constant coughing and sneezing, a constant projection of sputum spray from which it was impossible to escape.

Habits acquired in civil life are carried into the camp where their evil effects are given full sway by the close contact in barracks, tents, mess halls, theaters and other buildings where numbers collect together.

Two facts of interest have been brought out clearly, (1) the greater susceptibility of the rural man to the contagious diseases, such as measles, mumps, scarlet fever and the pneumonias; (2) the southern man over the northern to the acute respiratory infections.

The first may be explained by immunity established in early life through having had the so-called diseases of childhood, or by a resistance acquired through prolonged exposure to the bacteria of crowds.

The greater susceptibility of southern men may be explained partly by the fact that they are largely rural, and partly by lowering influences, such as endemic malaria and hookworm, though the facts are not made entirely clear by these explanations.

Data based on 1,325,000 men liable to pneumonia indicate that the susceptibility to both the lobar and bronchial forms is greatest in those born in the warm states, and encamped in warm states, and next in those born in cold states and encamped in cold states, while those moved from warm to cold or cold to warm suffered less.

The full significance of these and other observations is not entirely clear at present, though it is obvious that they should be taken into consideration in future mobilization, especially if they are confirmed by further study.

Those outstanding defects already mentioned, insufficient clothing, bedding, barracks and tentage, with consequent overcrowding and discomfort are more or less inevitable when an emergency arises requiring a large army in a short time, though let it be hoped that never again will



this country be influenced by pacifists or be found in such a woeful state of unpreparedness as in 1917.

Some measures which were potent in spreading infections could be avoided, such as the constant movement of troops between camps, often from those known to be infected. Men known to have been exposed were often sent to other camps, and without proper notice to the receiving camp. At Camp Kearney on one occasion out of a comparatively small contingent, eight men were sent direct from the train to the hospital and four more within a few hours. A new camp had to be pitched to care for this infected lot of men. Two days later a letter arrived from the sending camp which stated that the men had been exposed to contagious disease before leaving.

Many similar instances have been reported. Indeed, it has been suspected that undesirables were purposely gotten rid of in this way.

Contact is the greatest factor in the spread of acute infections, and individual resistance the chief factor in restricting their ravages. Our efforts must then be directed to limiting the one and in building up the other.

Among the measures which are obvious and capable of enforcement two may be mentioned: (1) Better machinery available to local boards as well as at the camps for the detection of carriers, incipient or mild cases, and their exclusion from troop trains and camps; (2) well isolated detention camps for the reception of all recruits, and contingents from other camps where possible exposure is suspected.

In civil life the more general use of prophylactic vaccines should be urged and physical culture popularized.

It is too much to hope, however, that disease will be excluded from camps. Intercourse with the civil communities is necessary, and some infection will be brought in in spite of all we can do.

This opens up the tremendous question of public health in general, which is beyond the scope of this paper. Suffice it to say that the draft has made it possible for the first time to ascertain the physical condition of young men throughout the country. Of 5,719,152 men, 21 to 31 years of age examined, 1,680,175, or 29.35 per cent., were found unfit for military duty on account of physical defects. A large number of these were considered remediable or had been remediable in their incipency. Surely these figures demonstrate convincingly the necessity of far-reaching measures for the betterment of conditions throughout the country and the education of the general public in the fundamentals of hygiene and good living. In this the medical profession must take the lead. It has required a world crisis to awaken the public and effort must be continuous to keep it awake. Not

yet has the lesson reached been taken to heart by our law-makers. If America is to continue to hold first place the words of Lord Beaconsfield must be our slogan: "The public health is the foundation on which reposes the happiness of the people and the power of a country. The care of the public health is the first duty of a statesman."

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#### DISCUSSION

DR. J. F. BINNIE, Kansas City: In this war the territory that was fought over was terrible. It was excellent for certain purposes, but horrible for others. The ground was full of germs and yet we never had a case of tetanus. Why? Antitetanic serum. Sanitation in part was carried out well. On paper it was carried out admirably. I was surprised at the fine work done by many regimental surgeons in keeping up sanitation in their organizations, but in the really advanced areas sanitation was an impossibility. At one place which very recently had been No Man's Land the toilet facilities were just shell holes, that was all. Men had to live, move and have their being in these horrible surroundings. Lyster bags were filled with chlorin water and the men were prohibited from drinking anything else but chlorin water, but as a matter of fact when a man got to the front and his canteen was empty he would drink water wherever he could find it, and that water was filthy. In going along the roads one would often see the almost castiron French military loaves fall out of a wagon into the mud. They might be picked up and perhaps brushed off roughly with a coat sleeve, perhaps not, and chucked into the wagon again. Thank goodness, the bread had a crust on it which was water-proof and almost hammer proof. As a result of the above one would have expected much typhoid fever, and yet, as has been shown today, typhoid was almost unknown in the American Expeditionary Forces for the first time in the history of war. Why? You all know—vaccination. The sanitation was as good as it could be, but we must remember that it was only as good as it could be, and in some places that was not saying very much.

We had most excellent arrangements, as was mentioned here today, for so many cubic feet of air space in the hospitals, and these rules were never broken *except* when they were broken. In the Limoges center, where I was for some time, there was a most excellent hospital located in a china factory. In that factory there was a double tier of berths on one side of a passage way. What for? For the enlisted men! The hospital was so crowded that the enlisted men of the hospital were put into that sort of accommodations. In our own hospital, No. 28, the crowding was terrific. The wards were narrow, so narrow that you could hardly pass between the beds, you had to juggle to get by. One bed was just as close to another as it could be and leave a little room for passage. The hospital, altogether, was supposed to have 2,500 beds, but we had over 2,960 beds in it at one time. That was the sort of crowding we were up against when the influenza was common in that neighborhood, but the wounded men (I think I will be sustained in this by any surgeon with experience in a base hospital), those wounded in the legs, could laugh at influenza. They got influenza but they recovered from this as from a minor ill. At first so many bad cases of influenza came in that it was made an absolute rule that every patient who developed any, even a very slight, elevation of temperature was put to bed and kept there until his temperature was normal again. After this rule was enforced the death

rate from influenza was exceedingly small. There are many such things I could speak of, but let us learn the lesson from these few.

We got right down to the simple life as regards hospitals. Those of you who were at home, those who were in the cantonment hospitals, had luxury. Those hospitals in France which I visited were not luxurious, but they were practical and our patients did well.

In the future we must look after our population here at home better. When a man develops some elevation of temperature, he should be put to bed and kept there and care should be given him. If he is living in a boarding house, he cannot get the necessary care; he ought to go to a hospital. At the present time the hospitals are not in shape to take care of such people. If he is sent to one of the big general hospitals of a city he is a charity patient, and he does not wish to be a charity patient. If he goes to one of the so-called hospitals which are practically what the English call "nursing homes," with a few charity patients on the side, if he is sent to one of these the charges are so high that he has not the money to pay the doctor or to build up his health after he gets out. We must get down to the simple life, and have our hospitals so built that we need not have the charges so high as to be prohibitive to those who require care in order to avert serious illness.

DR. AMOS T. FISHER, Kansas City: I wish to speak of cases like measles, scarlet fever, influenza, etc. I was sanitary officer at Fort Omaha when the influenza was so severe and recommended the use of the atomizer and a preparation of menthol, grs. V; oil pine needles, gts. XX; camphor, grs. V; eucalyptol, drams I; albolene q. s. ad. oz. II. Sig.: Spray nose and throat often.

The quartermaster at Omaha asked me to make a talk on influenza to his employees and after telling them to live simply, eat good food, sleep well, drink much fresh water and not to get scared about the "flu," I gave them the above prescription. After two months the quartermaster told me that he gave each employee a copy of the prescription and that among 350 there had not been a case of influenza.

During my six years as public health officer there was not an epidemic of anything. A child of seven in a Sunday-school class was sneezing and coughing, had a sore throat and fever. That night she was found to have a typical case of scarlet fever. I at once called the Sunday-school teacher and got the names of the other pupils in this class and told their parents what to do, using this prescription, and out of twenty-five children exposed not one took the scarlet fever, and that little preparation is what I use.

DR. MAZYCK P. RAVENEL, closing: I simply want to add a word in support of what Dr. Morfit has said about the future for us in this country. The greatest problem before us at the present moment is the venereal question. You all know that the last legislature failed to accept from the government the \$35,000 which was to be given to Missouri as its share for the prevention of venereal diseases, consequently we have in all Missouri only one free dispensary (that is the published statement although I do not think it is true) for venereal prophylaxis. That is the situation at the present time.<sup>2</sup>

Over in Kansas, according to the daily papers, Dr. De Vilbiss has resigned because the legislature gave \$25,000 to take care of hogs, \$8,000 for bees, and only \$7,000 for children.

I once heard the Surgeon-General of the Public Health Service say that he had only \$22,000 per year to spend for the supervision of all the human biological products in the country. The Chief of the Bureau of Animal Industry said he had that year \$325,000 for animal diseases, of which he was required to spend \$50,000 on hog cholera alone. We take care of our animals and bees and plants. I will guarantee to go before any legislature in the Union and get any reasonable amount of money for hogs, cattle, sheep, for chickens, bees, for plants and even grass; but if you ask me to get money for the care of human beings I will not take the contract.

Dr. Hurty, Health Officer of Indiana, wrote a fable which admirably expresses the situation. It runs like this in part: A young mother realizing that she had consumption wrote to the board of health: "I understand that my disease is curable in the early stages. I can't afford to die. I have a husband to care for and two children to bring up. Where can I go to be cured?" The reply was, "The great Christian state of Indiana has not yet awakened to the importance of saving young mothers, but it has appointed guardians who will see that your orphans are cared for and properly brought up, and when educated that they are taught trades and placed in good surroundings, so go ahead and die in peace and do not worry about your children." In contrast to this a farmer woke one morning and on going to the barn found his hogs suffering with cholera. He telegraphed to Washington: "I have hog cholera on my farm, can you help me?" The Secretary of Agriculture replied, "Certainly, we have 1,600 experts" (a public statement made by the Secretary at that time). So a government veterinarian was sent with serum and syringes, all at public expense, and the hogs were cured. What was the difference? The hogs could be made into lard, hams, bacon, sausage, etc., and sold. The young mother was useless for such purposes. Moral. Be a hog and be worth being saved.

#### ACUTE EMPYEMA: ITS DIAGNOSIS AND TREATMENT\*

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ST. LOUIS

Probably no other surgical condition is more easily diagnosed than empyema and very few serious surgical conditions are more common, especially in the winter and spring months, and it seems to me that hardly any other serious and easily remedied surgical condition is so often overlooked. What can be more humiliating for the physician than to find postmortem or even a short while antemortem that after his having carefully tended a patient for typhoid, malaria, pneumonia, or any other disease, the cause of death was an empyema, undiscovered or discovered too late. I might perhaps have chosen a topic which would have enabled me to show off to better advantage, or which would have been more entertaining to those of you who do surgery, but if my visit down here and what I say results in aiding even one more among you toward making an earlier diagnosis or in administering better treatment than before,

1. Although the legislature failed to pass the venereal disease bill prepared by the U. S. Public Health Service, it did empower the State Board of Health to establish a Division on Venereal Diseases, and the board has recently secured an allotment of \$35,808 from the federal government to be matched by a similar sum to be appropriated by the state.—[Ed.]

\* Read at the Postgraduate Meeting, 28th Councilor District, Springfield, Oct. 23, 1919.



then my efforts will be well repaid, for more than one life will probably be saved as a consequence.

First I shall consider traumatic empyema for although it is not so often undiagnosed or untreated I know from my own experience that such does happen. In this type the trauma may be applied directly to the involved pleura or not and there may or may not be an external wound of the chest. It is possible that a wound of the pleura can be caused by a blow on the chest surface which leaves no mark and what at first may be diagnosed "simple contusion" may terminate fatally in empyema. Any kind of chest wound may be the exciting cause, a knife thrust, a gunshot, a fractured rib without or with external wound, or as said before, a contusion over any part of the pleural surface.

Of the stab wounds and gunshot wounds we have the nonpenetrating and the penetrating, remembering that gunshot wounds often completely perforate. Of course the nonpenetrating wound is not so likely to be followed by an empyema but it does happen and it is in these in which it is least likely to happen that we are most apt to overlook it. If the bullet perforate, empyema is not so likely to ensue as it is after the penetrating wound, and yet it does happen. The penetrating wound with or without lung injury is the one most likely to be complicated by empyema but its frequency can be much diminished by treatment.

If the lung be involved in the trauma the patient almost always has some temperature for the first few days even when running what we consider a normal course. There is always a reaction of the lung to the injury—an inflammation of the lung, or local pneumonitis. The pulse and respirations are slightly increased and the physical signs except the roentgen-ray shadow are negative. The roentgen ray shows some condensation of lung tissue in the neighborhood of the lung injury. If the case is to get well without complication, the temperature begins to fall after about the fifth day and soon all the symptoms disappear.

If, however, trouble is brewing the temperature does not come to normal but begins to range more widely and becomes more irregular in its ups and downs. This temperature range may for several days escape the notice of the doctor for at each succeeding visit he may find a temperature normal or nearly so. Not so with the pulse. With pus in the chest the pulse hardly ever comes to normal, no matter at what hour and no matter what the accompanying temperature. The fingers are worth more than the thermometer although the thermometer is valuable, but for the temperature to be of its greatest value it must be recorded every two hours. The respiration does not vary so much as one might expect. If it is much increased there is

likely to be considerable reaction in the lung itself, the pneumonitis in the wound neighborhood is spreading and the inflammation is now bacterial in origin and not merely traumatic. If the pulse and temperature are due to pleural involvement alone the patient never breathes so rapidly as he does with lung infection and it is very common to remove several quarts of pus from a chest the owner of which before the operation was breathing 18 to 24 times a minute.

To expect a chill or a succession of them is delusive, and although a chill is often a good positive sign of the presence of pus yet its absence from start to finish is by no means uncommon. Sweats and pallor of yellowish tinge with loss of flesh generally show up pretty constantly in the second week after the infection of the pleural cavity. But both sweats and even extremely jaundiced skin I have often observed when nothing but sterile bloody serum could be aspirated from the chest. This is not true of loss of weight to the same degree for so long as the fluid is sterile the appetite of the otherwise normal case is not so much impaired.

Of the diagnosis of the nontraumatic type I need not say much as the medical colleagues have pretty well emphasized its diagnosis. We have that complicating disease of the chest and that following or accompanying disease elsewhere.

Of the empyema complicating or ensuing on disease within the chest, the most frequently seen is that following pneumonia and the kind of pneumonia is the streptococcus variety so common last year with influenza. Empyema, of course, does follow lobar pneumonia. This is the best thing about it—it follows it. It rarely complicates or accompanies lobar pneumonia of the same side but it does unfortunately accompany the streptococcus pneumonitis of "flu" and often the pneumonia and also the empyema are present on one or both sides *at the same time*; and it is very common to have bilateral pneumonia and unilateral empyema present at once.

The lobar pneumonia which, having had its crisis, begins after a few days to show a little persistent temperature and increasing pulse must be carefully gone over. It will often be impossible—most often in fact—to have the aid of the roentgen ray but your other aids you have always with you. Over the pus the tactile fremitus is always absent and a large enough needle will always bring out a sample. I never hesitate to put in a needle and I always put in a large enough one. Do not use an ordinary hypodermic needle—they are dangerous. I have been called to look for about nine or ten and four have never been found yet. Some say the pus is often too thick to come through a needle. That may be so but those are old cases. Fibrin may plug a needle as may blood clot but a culture from the needle

point in such cases has sometimes given us a positive growth. I would say that the empyema which cannot be found by any intelligent enterprising man with a needle as large as the lead in a lead pencil is not an empyema that is crying aloud for surgical intervention.

It does happen that abscesses form between the lobes and being far from the surface they cannot be easily found with a needle; these no one need be ashamed of not finding early.

I know of only two ways to make certain of the presence of an effusion in those cases complicating influenza pneumonia. Auscultation and percussion fail in the presence of consolidation, engorgement, and resolution, all going on at the same time. The roentgen ray is one of the best means of diagnosis but the very best I think is the exploring needle used on suspicion and used frequently. In our hospital it at last had to be made a general order to needle every "flu" case frequently. After that order went into effect we saw no more undiagnosed empyema in the postmortem room.

Then there are cases coming on during or after measles and typhoid and common colds. I rather think it is a most uncommon cold which can cause an empyema. But perhaps the cold is an indirect cause. No matter what the cause the failure to make a correct and early diagnosis is almost always due to lack of thorough and frequent examination. One having made a correct diagnosis of the original disease be it pneumonia, measles, typhoid or what not, is inclined to cease his examinations and let it go at that until the patient is in an extremely perilous condition. If one will thoroughly investigate each case, even once in two days with even the ordinary means, very few cases will be overlooked and fewer still will be overlooked if one gets over thinking it is a mistake to put a needle into a chest when no fluid is present. So never let your conscience trouble you if you resort to the needle and find your exploration negative. I believe the fear of not finding fluid often deters a man from having recourse to the needle in the early days of the trouble.

And now having discovered the fluid and being satisfied that the fluid contains pyogenic organisms what is the best course to pursue. Of course one knows that the proper thing to do with pus anywhere is to evacuate it. We used to say that having discovered an empyema the surgeon must at once be called in and the pleural cavity must at once be drained after resecting a rib. Our ideas in regard to this have in the past eight or ten years undergone a change. The change has become more widespread since so many of our men went into the army.

Given an empyema complicating influenza, the patient is probably very ill, very likely there is evidence of pneumonitis in both lungs, or per-

haps pneumonia and effusion on one side and severe bronchitis on the other. If you operate on such a case most probably the outcome will be fatal. For the side on which you operate is thereby put out of commission and that lung ceases to functionate at all, while the disease progresses in the other. What then is the wisest course to pursue? Decidedly the better thing to do is to do nothing more than to aspirate the pus. By repeated aspiration absorption of poison from the cavity can be diminished and the patient carried along until his acute lung condition subsides and then if need be an operation can be performed.

Given a case in which the diagnosis has been delayed until the patient is almost in extremis, what shall we do? The shock of an operation may kill the patient. Again I would say aspirate. And in these cases where there is a great quantity of pus never aspirate all at one sitting. Remove a quantity every four, six, eight or twelve hours and most likely the condition of the patient will so improve that he can stand an operation by the end of a week or sooner. Often a patient will stand a simple incision when he cannot stand a rib resection. Two operations and a living patient are better than one complete operation and a dead patient.

The choice of operation ought to be left to the surgeon. Very few such operations nowadays are done under general anesthesia. With a local anesthetic aided by morphin many a case can be operated in comparative safety where a general anesthetic would increase the hazard. If a general anesthetic is used gas and oxygen is the one of choice and speed is a desideratum. With children local anesthesia is not desirable, but in children simple incision and drainage between the ribs will most often be the only operation needed and the time required is not more than two minutes. All the usual precautions are taken to diminish shock. Morphin is given one hour before operation so that the patient is drowsy before being brought to the room. Loss of body heat is prevented. The patient is fortified with some stimulant some time before operation. The operation is quickly finished. The opening is well to the back if the patient will remain in bed for some time afterward. He will so remain in bed only when he has some disease which the empyema has complicated. No time is lost in irrigation on the table. Tubes are fastened so that they cannot slip out or in. The skin about the wound is smeared with vaselin and a large square of rubber dam is laid over the wound on the vaselin; this prevents air from rushing in and does not impede the exit of the pus. Over this the pads and binder are placed and the patient quickly got back to bed.

The after treatment is important. Some irrigate, others do not. I believe it is better to



irrigate and we are using Dakin's solution, but any good antiseptic is valuable I think. I have seen patients die from secondary infection with putrefactive bacteria—never in irrigated cases. If irrigation is used care must be taken not to use a strong irritant poison and if any solution causes the patient cough or pain it should be discontinued. I have used irrigation in cases when there was a bronchial fistula but that was when we had used Dakin tubes and there was free exit for the fluid. If no such fistula exists the fluid is allowed to flow in after turning the patient so that the cavity can be completely filled before any of the fluid runs out. The fluid is of course always used warm but never hot.

From the first, exercise is given the patient and he is made to use the blowing bottles every hour unless he is quite too ill. A blowing exercise lasts at first only a minute but I increase the time as the patient's strength increases until he is able to blow for five minutes every hour. After that we have him time himself while he empties the bottle so that working against time he does more work in the five minutes. The patient is got up out of bed just as soon as he is strong enough to do so, and until then he is set up in bed unless there is some contraindication to sitting up. Some kind of stimulating tonic is always indicated in those who have been very ill and I am old-fashioned enough to think that all persons who have suppurating wounds should be given small doses of quinin every day.

Now about the drainage tubes. It is my own opinion that very often a tube is worn too long. I have often, in operating for chronic empyema, removed sequestra of bone where the necrosis seemed to have been caused by the pressure of the tube. For an adult I always use two pieces of tubing (in acute cases) and each piece is three-fourths inch wide. The tube is of pure gum rubber and it never protrudes more than one inch inside the cavity unless to drain an abscess some distance from the opening. I make no attempt to nicely close my soft tissues around my tubes. Such an act is unsurgical in empyema. Leave the wound wide open. If you fear that the pus will be absorbed from so much raw surface smear the raw surface well with vaselin before you open the pleura. I promise you the skin edge about will never even turn red. Such is not true where the wound is partially closed. The tubes are removed at the end of a week. Every day thereafter as long as it can be done at each dressing, as many fingers (gloved) as can be are introduced together through the opening into the chest. This will prevent the wound from closing before the visceral pleura has grown fast to the parietal pleura. The rubber dam is constantly worn over the opening until the chest wound is closed. One thing that

militalates against complete and perfect drainage is leaving the periosteum of the resected ribs. I remove both rib and periosteum. When the periosteum is left the opening in the chest soon narrows down and the fingers cannot dilate it daily because new bone is being formed in the periosteum. Many a time in old empyemata have I demonstrated an opening about pencil size right through the middle of the new formed rib.

By treating our cases as I have outlined I have never had a single acute case become chronic nor need any of those deforming operations where the chest wall is loosened to close the cavity. I have performed such operations as well as those of Delorme, Tuffier, and others, but never on a case where I treated the patient from the beginning. There ought to be no deaths, but there will be some where patients are ill with other disease and when they are "in extremis" before operation. I insist, however, that by following the rules here briefly and imperfectly laid down that the general mortality in acute empyema will soon be as low as that in acute appendicitis and I believe that operations for chronic empyema will be only occasionally performed.

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#### TREATMENT OF EMPYEMA BY THE CARREL-DAKIN METHOD

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The treatment of empyema by the Carrel-Dakin method requires a special technic differing somewhat from that of ordinary infected wounds as outlined in the former paper.<sup>1</sup> The details as given here are the result of our experience in this work at the U. S. Army General Hospital No. 2, Fort McHenry, Md.

Empyema following croupous pneumonia differs from that following bronchopneumonia in time of development and pathology. In the former, from five to ten days after the temperature has reached normal there is a recurrence of the elevated temperature and rapid pulse with the physical signs of fluid, dullness on percussion, absence or diminution of breath sounds, and the shadow shown by roentgen-ray. Aspiration reveals the presence of thick, creamy pus.

The question as to whether a rib resection or intercostal incision is to be performed depends on a number of factors. If the patient is a child, intercostal incision will give sufficient drainage, due to the greater elasticity of the chest walls and wider space between the ribs.

1. See January, 1920, issue.

Where the toxemia is great, and the patient is an adult, it is the operation of choice since it can be done more quickly and with less shock. Rib resection can be performed later when the general condition improves if drainage is not adequate. Where the cavity appears to be a large one a portion of the rib should be removed unless the condition of the patient is grave.

Under gas or local anesthesia an intercostal incision or rib resection over the point of aspiration liberates a quantity of pus and lymph. The finger inserted in the pleura finds that the empyema cavity is closed off by firm adhesions and the lung not collapsed. An opening is made sufficiently large to permit the insertion of a drainage tube and the number of Dakin tubes required to irrigate the walls of the cavity. Pus is evacuated, masses of lymph removed and the tubes placed.

Dakin instillations are given every two hours, the quantity used being from 50 to 250 c.c., according to the size of the cavity. There is a rapid improvement in the symptoms of toxemia and after two or three days the purulent discharge is converted into a colorless, odorless, gelatinous fluid, resembling the uncooked white of an egg, with a steady diminution in the number of bacteria present in the smears. In from five days to two weeks, smears and cultures become sterile and a secondary closure is performed by the method to be described later.

Empyema secondary to bronchopneumonia often develops while the pneumonic process is still active, instead of coming on after resolution as in croupous pneumonia, and the physical signs and roentgen-ray findings indicate the presence of fluid plus consolidation. The fluid obtained by aspiration is seropurulent (most of our cases for the past two years have been postinfluenzal) and almost no adhesions between the visceral and the parietal pleurae are found.

These cases should be aspirated daily if necessary to relieve pressure symptoms, until the pneumonia undergoes resolution or the fluid becomes frankly purulent. Then, in these acutely ill cases, it is best to insert under local anesthesia after making a short incision through the skin, a trocar and cannula just large enough to permit the passage of a drainage tube through the cannula when the trocar is removed, or the instrument devised by Diederich<sup>1</sup> may be used. Air is prevented from entering the pleura by placing the thumb over the cannula, the outer end closed and the cannula withdrawn. The skin fits so tightly around the tube that escape of fluid or ingress of air is impossible. The tube is fixed to the skin with a silkworm gut suture, a clamp placed on it and sterile dressings applied. By taking precaution to keep the cannula closed during exhalation and to insert the

tube during inhalation entrance of air and collapse of lung are prevented and the patient suffers no shock. There is no doubt but that pneumothorax is a very dangerous complication in this variety of empyema and quite frequently causes a fatal outcome.

Every two hours the cavity is irrigated with Dakin's solution until it returns clear, a quantity less than the capacity left in it and the tube clamped. Symptoms of toxemia rapidly disappear, adhesions form limiting the cavity and in a few cases the bacteriologic count gradually falls to zero, the tube is removed and the opening heals.

In a number of cases it is necessary, when the pneumonic process has entirely cleared up, either to enlarge the intercostal opening or do a rib resection, which is preferable in adults, to permit the introduction of instillation tubes and a drainage tube. As soon as their condition permits, patients are encouraged to sit up and when able to walk around, and suitable breathing exercises are prescribed.

*Technic of dressings.*—Next to having the solution conform to the definition, this is the most important thing in the treatment and where the personal equation counts for most. The patients are dressed once in twenty-four hours. Instrumental technic is used entirely and forceps are discarded on the slightest suspicion of contamination. Gentleness comes next, for these patients bleed easily and the removal of the tubes readily starts hemorrhage, which, however, is never serious, coming as it does from granulations on the pleurae. The patient is dressed in the sitting or reclining position, depending on the location of his wound, the dressings and vaseline gauze are removed with instruments and, if smears or culture are to be taken, the tubes also. The skin is cleansed with neutral soap, water and benzine and the instruments used discarded. If the tubes are not to be removed it must be ascertained that the openings are not occluded; if they are removed, a soft rubber catheter is inserted. In either case the cavity is irrigated with Dakin's solution until it returns clear.

To patients having bronchial fistulae the hypochlorite solution is irritating and causes coughing. A great deal of this can be avoided by using low pressure and a small quantity in these cases and training them to suppress as much as possible the inclination to cough. Fistulae soon close under this plan and in none of our cases did we consider it necessary to discontinue its use on this account.

Dakin tubes are inserted gently into the cavity, the number depending on its size and quantity of discharge, it being the object to spray its walls with the solution. Where it extends upwards, tubes stiffened by a stylet of silver wire are employed to reach the top. They are strapped to the chest with adhesive some dis-

1. Diederich, Victor P.: A Review of the Treatment of Purulent Pleuritis (Empyema) at Camp Pike, Base Hospital, Surg. Gynec. & Obst., 1919, 28: 363.



tance from the wound. The drainage tube is as large as can be inserted, usually from 7 to 10 mm. in diameter and as long as is necessary to reach the cavity, depending on the thickness of the chest wall. A safety pin always transfixes the drainage tube and the pin is fixed to the chest wall by adhesive to prevent the tube escaping into the pleura and also to keep it from being dislodged. The tubes are tested by connecting each in turn with the container. The rate of flow through them should be equal and there should be no obstruction to the return through the drainage tube. Vaseline gauze is then applied to protect the skin, fluffs of gauze placed over the incision and a large cotton pad covered with gauze envelops the chest and is held in place by a binder. The tubes are fastened to the upper part of the pad with safety pins. Every two hours, day and night, instillations are given, at low pressure, the quantity being determined by the capacity of the cavity.

*Bacteriologic control.*—Every second day Dakin's is withheld from the patient for the two hours previous to the time of beginning dressings. The tubes are removed, a sterile platinum loop inserted into the cavity and a specimen of the discharge obtained. This is spread in a thin film over a clean glass slide, dried, labeled and sent to the laboratory for staining and counting the number of bacteria per field. These reports are charted on a sheet ruled in squares and a curve plotted. There should be a rapid decrease in the smear count and if the treatment has been correctly carried out, it should drop to zero in a week or ten days. A culture is made on each case to determine the organism present.

*Secondary closure.*—Secondary closure should not be attempted in any case showing streptococcus hemolyticus in culture. When it has been present, at least two consecutive sterile cultures are necessary before closure is to be attempted. Some cases close spontaneously when the tubes are removed, but this is usually where the cavity is small.

Local anesthesia with novocain 0.5 per cent., or gas (preferably the latter) is used. Dakin instillations are kept up until the time of operation and the cavity is irrigated with it on the table. The whole scar and tract are excised by an elliptical incision, the intercostal muscles and fascia brought together by interrupted catgut sutures in such a manner as to close the opening into the pleura, then the skin which has been undercut is sutured with silk worm gut. Dry sterile dressings are applied and the patient returned to bed, where he must remain three or four days.

The cases usually show a moderate elevation of temperature for a day or two gradually returning to normal. The incisions are inspected daily or every other day and dressed with gauze compresses wet with Dakin's, stitches showing

signs of infection or cutting are removed. The sutures are removed about the tenth day and deep breathing exercises begun.

*Results.*—Before I became Chief of the Department of Chemical Antisepsis secondary suture had been performed on five cases, three of which remained closed and the remaining two broke open, one after ten, the other after thirteen days.

Lieut. Earl W. Thoma of Buffalo, who was ward surgeon of the empyema ward, and I operated on ten patients, two of whom had had multiple rib resections in an effort to obliterate the cavities seven months previously but without success. They had been draining from three to sixteen months and were mostly post-influenzal. The largest cavity had a capacity of 250 c.c. All had been sterile to smear for three successive examinations (six days) and the streptococcus hemolyticus proved absent by culture.

The operations were done under local anesthesia with 0.5 per cent. novocain, because at that time our gas-oxygen machine was out of order and also there was less difficulty in persuading the patients to submit if general anesthesia were not required. Every one of the ten healed by first intention and have remained so up to the present time (six months), with the exception of one patient who died six weeks after operation of a brain abscess which, the pathologist said at necropsy, had existed for a long time. There were very few adhesions in his chest at the site of the empyema, the cavity was very much diminished in size and filled with blood clot sterile both to smear and culture. This patient had drained for sixteen months and had been subjected to a multiple rib resection which failed to cure the condition.

Lieutenant Thoma closed two more after I was discharged. Both healed by primary union but about two weeks later one developed temperature of 100 F. and showed signs of fluid in the pleura. He opened the incision and evacuated a quantity of serosanguineous fluid which was sterile both to smear and culture. He believes that aspiration would have removed the fluid and that incision was unnecessary since there was no infection. The air in the cavity had been absorbed and effusion of serum took place to relieve the vacuum. The cavity was noticeably smaller due to expansion of the lung.

Ingraham, Roddy and Aronson,<sup>2</sup> in the report on empyema at Camp Doniphan, say there was no appreciable change under Dakin treatment in the bacterial counts or diminution of the discharge or odor and the patients on whom the solution was not used improved more rapidly. It is evident to any one who has had experience with the neutral hypochlorite solu-

2. Ingraham, C. B.; Roddy, John A.; Aronson, Joseph D.: A Study of Empyema Cases at Camp Doniphan, Surg. Gynec. & Obst. (Dec.) 1918, 554.

tion that in these cases it was not brought into contact with all parts of the empyema cavity, since the first and most striking phenomenon noted is diminution and disappearance of macroscopic pus accompanied by a fall in the bacterial counts. They also say, "Not one has been able to resume full duty status, it is very doubtful if any of these patients will become fit for full performance of duty as a soldier within six months after operation and the majority undoubtedly never will."

Stewart,<sup>3</sup> at the War Demonstration Hospital, Rockefeller Institute, was able to close his cases in from five to twelve days, the average time being fourteen days, obtained primary union in 70 per cent., and where secondary sterilization was necessary, quickly accomplished it. One patient was returned to duty twenty-one days after operation and not a single one recommended for surgical certificate of disability from the army or navy.

#### CONCLUSIONS

Differentiation between empyema following croupous and that following bronchopneumonia is of the greatest importance in determining the plan of treatment. In the latter, aspiration should be performed repeatedly, if necessary, until the fluid becomes frankly purulent. Where sufficient fluid can not be withdrawn with the needle it is good practice to insert a soft rubber catheter into the pleura through a trocar and cannula, preventing the entrance of air.

Sterilization of the cavity can be promptly obtained if the tubes are properly placed, and secondary closure can be performed with a large percentage of successes. If the incision does break open the cavity is smaller and secondary sterilization is easily obtained.

If the Carrel-Dakin method is carefully followed the results obtained in empyema excel those of any other method and the necessity of dangerous and mutilating operations is avoided. I believe that there will be no need of the radical rib resections and lung decortications if we will take the trouble to master the Carrel-Dakin technic.

Wall Building.

#### PRIMARY CARCINOMA OF NASOPHARYNX WITH REPORT OF A CASE

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There seems to be unusual difficulty in summarizing the literature on this subject. In 1904 Laval was able to collect only twenty-seven instances of primary carcinoma of the nasopharynx but since that time about thirty addi-

tional cases have been reported, including two by W. E. Gatewood of Chicago and two by Dittman of St. Paul.

Carcinoma of this region has at times probably been confounded with sarcoma and endothelioma for surgeons and pathologists do not always classify tumors alike.

Carcinoma of the nasopharynx usually begins in the vault or on the posterior wall, although Citelli reports four out of five beginning on the lateral wall. Malignant tumors of this region are characterized by a rather long latent period and give rise to almost identical symptoms. Laval gives the most complete description of the course, complications and differential diagnosis that I have seen. The tumor mass in the later stages after ulceration has begun always appears irregular with a fungous arrangement. Here as elsewhere the younger the individual the more rapidly fatal is the carcinoma. Extension may take place in any one of three directions:

1. Pharyngeal route: In these cases faulty alimentation is the cause of cachexia.

2. Nasal route: The growth extends forward invading the sphenoidal, ethmoidal, and frontal sinuses. The maxillary sinus or orbit may be involved. By this route the brain may be penetrated.

3. Posterior or cranial route: This is uncommon. The tumor generally invades the brain secondarily, causing compression. In these cases we have extreme persistent headache, ocular disturbance, exophthalmus, and other symptoms of tumor of the base.

It is fairly well established that carcinoma of the nasopharynx rarely produces visceral metastases but adenopathy is a very early symptom, more so with carcinoma of the nasopharynx than with other tumors of this region. Early adenopathy is so constant that in every case of cervical enlargement of the lymphatic glands the nose and throat should be carefully examined. Carcinoma is characterized by early infiltration, disintegration and destruction of neighboring structures.

The average age is forty years. The youngest patient I find reported was thirteen years of age and there are several between twenty and thirty years old. Rhinologists who have had wide experience have not observed this tumor in any of their patients. Moritz Schmidt in over 30,000 patients with diseases of nose and throat found none of carcinoma of the nasopharynx.

The symptoms are based on respiratory and auditory conditions and glandular enlargements in the cervical region.

General practitioners and also rhinologists have mistaken the disease for adenoids and simple fibromas. A mistaken diagnosis is especially likely to be made where there is infiltration and enlargement of the faucial tonsils.

3. Stewart, George A.: Treatment of Empyema by the Carrel-Dakin Method at the War Demonstration Hospital, The Rockefeller Institute for Medical Research, Med. Rec. (Aug. 10) 1918.



The following is a brief report of a case incomplete because of no postmortem:

Miss B., aged 31 years, single. Family history: Grandfather on mother's side died at age of 45 of tuberculosis. An uncle on the mother's side died at the age of 38 years from carcinoma located between the nose and throat. Previous history: Had always enjoyed good health up to 30 years of age, except several attacks of tonsillitis during childhood.

For about one year prior to Sept. 3, 1917, complained of feeling tired and worn out with considerable loss of weight. Later complained of stuffiness in nose occasionally blowing blood clots from nasal passages. Took cold easily, appetite fair, no disturbance of menstruation. During January or February, 1917, purple spots resembling a bruise developed on either side of the spinal column opposite about every other vertebra, the spots being tender and sore, and she suffered with severe backache.

On Sept. 3, 1917, her physician, Dr. W. H. Barron, brought her to me for relief of nasal obstruction or stuffiness in the nose. She was emaciated; color bad resembling a cachexia.

Examination.—Anterior rhinoscopy negative except a slight turgescence of the inferior turbinates. Pharynx, palate, and pillars rather pale. Tonsils quite small.

Posterior rhinoscopy revealed a mass in the vault of the pharynx resembling to some extent adenoids, but seemed too firm for adenoids, was irregular and presented a fungous arrangement. This mass occupied almost the entire vault so the obstruction to breathing through the nose was quite complete.

Glandular enlargements to the size of hazelnuts were noticeable along the sternocleidomastoid muscle on both sides of neck. I advised taking patient to the hospital for further observation, which was done and a blood examination by Dr. L. E. Monroe revealed a leukocytosis of 12,000, hemoglobin 70 per cent. Blood Wassermann was negative, urine normal. On September 10 we decided to remove the mass which was done with a LaForce adenotome and a curette and a specimen was sent to Dr. George Ives at St. Louis, who reported true carcinoma. The patient improved slightly and gained some weight. The nasal passage cleared up, she rested well at night, suffering no pain or backache, but color remained bad.

In about six weeks after its removal the mass began to reappear, especially on the lateral walls of vault. It grew rapidly and by the middle of December the patient was quite uncomfortable again. During January, 1918, she took to her bed suffering not only from nasal obstruction but from violent pains across the lumbar region which extended down the limbs. The condition grew worse rapidly. She could be relieved only temporarily by hypodermic injections of morphin. A large swelling developed under the angle of the right jaw. The glands extending down the right side of the neck to the clavicle were immensely enlarged, attaining the size of a small cocoanut and other masses or enlarged glands developed, some of them on the lower extremities.

The masses on the neck and limbs broke down and a septic condition developed with chills and a temperature of 102 to 104 F. Nausea and vomiting began soon after the mass on the right side of the neck appeared and continued until her death, March 15, 1918. There was never any distention of the abdomen nor evidence of involvement of any of the abdominal organs.

The infrequent occurrence of primary carcinoma of the nasopharynx and the importance of early diagnosis of the condition are urgent reasons why physicians should observe all tumors in this region with much care. The cases

have been variously diagnosed, e. g., tuberculous adenitis, malignant adenitis, etc., and the true primary lesion in the nasopharynx not discovered until postmortem, as happened in several cases reported by Gatewood.

#### HYSTERIA—ITS DIAGNOSIS, PROGNOSIS AND TREATMENT\*

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It is not from choice that I present this extremely trite subject for your approval, but prompted by a sense of duty incumbent on all medical men of long and of wide experience in the progressive field of physics, I hereby contribute my mite gleaned from many years of general practice in treating a proportionate number of neurotic patients met with in the varied field of operation.

I shall not endeavor to fully define hysteria for all are familiar with the history in common and the leading factors in this functional disturbance of brain, spinal cord, and sympathetic nervous system in particular. However, it becomes quite necessary and a valuable aid in diagnosis to relate many of the common exciting causes of an attack of hysteria. First of all, and a leading feature, is a deficient will power in restraining certain nervous manifestations rendering the patient susceptible to abnormal external impressions accentuating neurotic tendencies.

The allied conditions of hysteria, such as catalepsy, hystero-epilepsy, hysteria major and hysteria minor with all the various grades and degrees, are too numerous to classify in a brief essay and I shall treat them all as one variable and extremely flexible disorder of the whole physical and mental economy.

Hysteria is a true psychosis affecting about fifty males to 1,000 females. It effects the high and the low alike but it is more frequent with young girls reared in luxury and idleness. It is more common between the ages of 14 and 40 and seldom lasts long after reaching the menopause. This should be a coming consolation to all hysterically inclined females. Postmortem investigation has given no clew to the real morbid process causing this mental and physical impulsion. Being unable therefore to name the pathological features or to point out with any degree of accuracy the staple factors in the cause of hysteria, we shall not speculate at this time in the uncertainties of the hidden mysteries responsible for this nervous phenomena but direct attention to psychical and other influences exciting a condition of nervousness called hysteria.

\* Read at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.

Heredity plays an important rôle in the predispositions of many individuals, furnishing idiosyncrasies peculiar to neurotic subjects. This neurotic strain may pass down through several generations cropping out here and there in its descent. However, I have seen several members of the same family similarly affected.

We should not confound neurasthenia with true hysteria. While the two conditions may coexist, and many symptoms in common blend in some subjects, yet they are two distinct maladies and should be considered separately. These borderland cases are very difficult indeed to classify and to treat successfully. Hysteria is purely functional—an incoordination of nerve force, the mimicry as it were, of a disordered nervous system. Those who have heard the instinctive animal or mimicry of a sick, prostrated child, well know that it is produced from an unconscious mind. No one can produce a nervous mimicry by conscious effort, if so, it would be fraud and not a genuine mimicry. Hysteria, then, is the output of a subconscious mind running at random while the conscious mind, the controller of will power, is overwhelmed with excitants of one kind or another prompting, primarily, an attack of hysteria.

We have long since, with reluctance, however, discarded the belief that hysteria is nothing more than an imaginary ailment, for we have seen cases among the fastidious who were humiliated beyond measure at finding out about their ugly behavior during an attack of hysteria. I have seen patients actually refrain from going places where excitement prevailed for fear of an untimely attack of hysteria causing public comment and unwarranted ridicule. Hysteria is, in a wide sense, a manifestation of exaggerated emotional display of one or more of the countless postulatory diseases and must be carefully distinguished from malingering or shamming, which, when detected, should be treated with utmost contempt and profound ridicule. The essential determining difference between the fraudulent type and the true is this: Hysteria, as has been already mentioned, is purely a product of an unconscious mind, a force of which the subject is wholly ignorant. The false type is the operation of a conscious mind awkwardly feigning some familiar form of disease. In the former the patient is unaccountable for his or her acts while the latter subject is cognizant and wholly responsible for every physical or mental manifestation. In true hysteria there is no intention to deceive while in malingerers the whole purpose is a direct attempt at fraud. The strongest diagnostic difference between the false and the true is very simple indeed. Symptoms that answer a two-fold purpose both in differentiating between the conditions in question and in labeling the real prodigy in hysteria major from a more serious

cerebral lesion, are hallucinations, delusions and most of all, crying or shedding of tears. One feigning disease or an injury seldom, if ever, talks incoherently or shed tears. In my early practice many times just as I was about to arrive at the painful conclusion that I had a serious brain lesion producing one or more of the many dangerous forms of paralysis—just as I was almost ready to give an unfavorable prognosis as to the future destiny of my patient, there would come like a clap of thunder from the clear heavens, that unmistakable hysterical shriek redeeming the sad situation at the last moment, relieving me from the credulous predicament of making an irreparable blunder in my diagnosis and prognosis. How sweet the sound of some old familiar song sung by a patient that had been as silent as a tomb for hours causing us to ponder and wonder if we really had a cerebral hemorrhage, an abscess or a toxemia from some source yet undiscovered by us! Crying, laughing, praying, singing, gesticulating and all other involuntary demonstrations, furnish a haven of appreciable consequence to the young physician as well as older ones laboring with the baffling, manifold symptoms of an hysterical woman. Especially do we regard with the greatest significance the appearance of tears in the eyes of our patients when we were in doubt as to the real cause of such marked and apparently dangerous symptoms. We should always remember that a patient serious enough or injured severely enough to cause such profound and alarming subjective symptoms seen in these neurotic subjects never shed tears. Tears, then, is a concomitant symptom of hysteria, a most valuable aid in diagnosing this nervous malady.

As the field of neurology is unlimited in its variations, I shall, for the sake of brevity, summarize a list of some of the common ailments complained of by hysterical subjects: Anesthesia, general, in regions, patches, sometimes in one hand or in both. The same with the lower limbs, also visual, resulting in narrowed fields of vision, fits, or paroxysms with or without complete loss of consciousness, clonic and occasionally tonic spasms, tremors, convulsive movements, contortions sometimes of extreme violence, with or without cries, generally with cries, foaming at the mouth, clinched hands and in minor types frequent calling for some one to rub their hands and limbs. Pains in the joints and in different parts of the body more particularly the head. Headaches are a prevailing symptom of a hysterical diathesis. Paresis and paralysis of various organs and different parts of the body, contractions and contractures, paraplegia, hemiplegia, incoordination of muscular movements, mutism, stammering, aphonia, amnesia, coughs, dyspnea, dyspepsia and the All-Wise only knows what other



diseases may be simulated by these poor unfortunates, but this will suffice to show the general trend and common status of the neurotic element of which make up a large part of our work.

I will report a few cases from general practice coinciding with many symptoms just related:

Some years ago a young man was kicked by a horse, receiving the blow on the chest. Being of a nervous nature, he was seized with convulsions, having three or four at intervals of a few hours. When he had recovered from the traumatic hysteria he was found to have a rigid right arm and hand with the elbow flexed at right angle and the hand tightly closed on the thumb. The arm was stiff and useless and he could not be induced to use it, saying he had no power or control over it. He went about carrying it in a sling, doing what work he could about the farm with one hand. So unusual was the case that his physician brought him before the John T. Hodgen Medical Association as an interesting clinic. A committee of three was appointed to examine the case and report results. I was one of the three and failed to agree with the other two, one a noted neurologist of Kansas City, the other two claiming that the seat of trouble was in the brain and incurable. They pictured the ugly contractions and ultimate deformity by wasting away of the muscles of the hand and arm and so on. I took a shot at long range and claimed that it was purely functional and by all means curable. After a supposed losing fight on my part, the young man, who had heard the entire discussion, departed with his physician for home, some distance in the country, still carrying his arm in the same red bandana. The case was soon forgotten. One day about two months later to my surprise the young man came into my office carrying his arm in that same bandana as when he left the medical society two months previous. After a cordial greeting he informed me that he had come to have me do something for his useless arm and hand. With much earnestness I informed him that I could cure his trouble in a very few minutes right before his own eyes and that I wanted him to see me do it. While I was attending another patient in the consulting room my partner proceeded to camouflage him by telling him of my wonderful skill in treating that particular kind of cases. This was volunteered on his part, as no previous arrangement had been made, but it served a good purpose in strengthening his faith in me. Faith in the physician and full confidence in his methods, work wonders in suggestive therapeutics. I gave the young man a lecture concerning the nerves and anatomy of the arm and hand. I told him by massaging a certain nerve in the elbow we could re-establish function in the hand and arm. Taking hold of the flexed elbow with my left hand and the tightly clinched fist with the right, I began to manipulate the ulner nerve, producing a tingling sensation in the fingers, especially the last one. I worked the first or index finger out from its long cramped position. One by one I waxed out the remaining fingers, likewise the thumb, at the same time continuing calling his attention to the marvelous procedure, until I had the hand and fingers limbered up to their normal condition. Taking him by the hand I shook it vigorously, telling him that his hand was cured and to take the bandana from about his neck as he had no further use for it. He went out of the office as happy as a cockrobin after an April shower. He was permanently cured by yielding to the power of suggestion. Was he faking? No. He had a func-

tional disorder that would have in time proved disastrous to the future function of that member of the body. Was I faking? No. I was only applying one of the legitimate agencies of the boundless system of regular medicine—suggestion. Allow me to digress enough to say that it is this class of patients that furnish the bulk of business for osteopaths, chiropractors, Christian Scientists and all other pseudo sciences preying on the crudulity of the sick. It is from this class of cases that marvelous results are reported to the public as miraculous cures after many physicians of the old school have failed. It is this class of patients and this kind of cures (by suggestion) that fills the head of these human parasites with uncompromising egotism, causing them to assume the dignity of real masters of the healing art.

CASE 2.—A married lady, about 27, was suddenly seized with hysterical convulsions brought on by some domestic differences. After having three or four convulsions she gradually drifted into a state of acute hysterical mania. Shrieking, preaching, praying, laughing, crying and all the accompanying symptoms of acute mania were manifested. She became violent in her actions, tearing her clothing, pulling her hair, biting her attendants, tearing her pillow with her teeth, scattering feathers about the bed. It required three or four people to hold her on the bed. She would pound her head against the wall or bedstead until it seemed she would crack her skull. I was sent for repeatedly to quiet her with a hypo of morphin. This was about all I knew to do for her as she stubbornly refused to swallow anything. I have since learned that apomorphin has a wonderful effect in mental diversion, relieving an acute attack in many instances. These patients take to an opiate like an alley cat to a saucer of sweet cream. I had been called several times during the second night of the attack and was provokingly determined to try something different to relieve the disgusting situation. Neighbors and friends were much fatigued over loss of sleep and were losing interest in her case. My last call was about 3 o'clock a. m., and I had almost reached the limit of endurance. When I entered the room the patient was lying in the most uncomfortable position she could take with her eyes fixed on nothing—merely staring in space, and with her hands clinched was making regular alternating strokes at some imaginary object in the air. These strokes were regulated as to time as a piece of machinery, which is a diagnostic feature not to be lost sight of. I rolled up my sleeves and, at the great astonishment of those present, I proceeded to meet her challenge to fight by knocking her knuckles hard with my fists. I continued this fistic combat for about three minutes, when her conscious mind awakened sufficient to realize the ridiculousness of the procedure, turned her face to the wall, falling asleep in a few minutes. She slept for several hours, awaking in a normal condition and was up and about her household duties the following day.

CASE 3.—A strong, healthful girl, 14 years old, large and well developed, of humble parentage, was suddenly stricken with convulsions. The family physician was sent for and labored with the patient for several days. The attacks would occur at intervals of a few hours during the day and less frequent at night. She would have as many as twelve or more in the twenty-four hours. Very little food was taken in the meantime. A consultant was called in. Both agreed that she was suffering from cerebrospinal meningitis and dismissed themselves, saying she could not live but a few hours. They told the grief-stricken parents to call any other physician or physicians they choose. Being a new man in town, the father came to see me, telling me the history, saying that his

daughter was dying in awful agony, and begged of me to go to see her and perhaps I could relieve her terrible suffering. I went as a humane messenger, as any dutiful doctor would do. When I entered the room and saw the situation, I changed my mind as to the nature and prognosis of the case. There was the telltale feathers scattered over the bed and on the floor. She had torn the pillow with her teeth, her hair was all disheveled and her sleeping gown torn in strings about the sleeves and body. She was standing on her head and toes—extreme opisthotonos probably the misleading symptom in the previous diagnosis and prognosis. Suddenly she changed from this strenuous position to a complete relaxation on her back. Fixing her eyes on the ceiling she began muttering a prayer, the significance of which meant much to me. I emphatically informed the weeping mother that I could cure her daughter, when the mother fairly shouted: "O doctor, please save my child." I called the mother to another room to get a full history of her daughter's disposition and find out, if possible, the cause of the onset. She said she had scolded the girl and threatened to punish her severely for some childish or girlish indiscretion, when she suddenly went into a mad fit, as she called it. Now, being convinced that I was correct in my diagnosis, I proceeded to turn trumps early in the game. I sat near the patient and talked to the mother in a plain, straitforward manner, proclaiming with earnestness, that I could and would cure her in a very short time. I told the mother this that the girl in her semiconscious condition could hear and grasp the purport. I remarked that she was a very, very sick girl, but she was going to get well beyond any doubt. I prepared the medicine in the room—potassium bromid and chloral hydrate given in sugar syrup. I expected better results from the suggestions at that time than from the medicine. That was in the afternoon. The following morning I called to see her and she greeted me with a smiling "Good morning, doctor." She had a good a night's rest and ate a hearty breakfast. The second morning she was up, dressed and met me at the door. The evening of the third day she attended a negro camp meeting near by. This shows how rapidly these patients change from a seemingly dangerous aspect to normal.

CASE 4.—A young lady, 25 years old, with strong hysterical proclivities, took to her bed eight years ago, with what her family called nervousness. She has been treated by several doctors in the meantime without any permanent relief. I had charge of the case for about four years, seeing her once or twice a year when some intermediate trouble would set up or some new phase of her old malady would become exaggerated. I have seen her with all the categorical diseases simulated by these unfortunate individuals, from a whispering voice to complete aphonia, from a slight paresis to total paralysis of one or more limbs, from complete relaxation of the body to a sudden extreme rigidity. I have seen her linger long under breath suspension—until her folks would weep and say she was dead, when all of a sudden she would gasp and hurriedly fill the lungs with air and then repeat the same thing again and again. I have seen her tear at her throat, exclaiming in a smothered voice that she was choking to death (globushystericus), each time bringing a new wave of sympathy and endearing words from her family standing over her. For eight years this poor girl has been in bed, taking medicine of one kind or another, saying she could not live without it. She sleeps well most of the time, eats three meals a day prepared and served in true hospital style. She lies in bed with her head propped up and crochets or does tatting, and does it most beautifully. She is lifted out and in bed when using

the toilet or having her bed changed. She is intelligent and always in a happy mood when not in one of her hysterical paroxysms. There is no paralysis when in her usual composure only a profound weakness and an inability to stand or walk, saying she cannot stand and if you try to assist her she begins to jerk her head back and forth and if persistent in the effort to get her to stand, she will bend backward like a hoopsnake until you are compelled to place her on the bed when the opisthotonos instantly ceases. She is conscious of her action all the time but cannot control herself. She is a fine subject for Christian Science or some other hoodooism to work on because she is open to suggestion, which has never been tried except in emergency and temporarily applied then. What is the matter with this patient that she cannot be cured when her ailments are amenable to legitimate methods of scientific medicine? First let me say that this is a case of hysterioneurasthenia and must be handled with double precaution. The greatest obstacle in the way of proper care of this case is home environment. The entire family, consisting of father, mother and two sisters, all of whom are overwhelmed with sympathy for her and will not work in harmony with anyone offering suggestions that she can be cured by any method of this long invalidism. They are completely hoodwinked by this whimsical woman and stand in the way of all efforts made to convince the patient that her trouble is functional pure and simple and that she could, under proper treatment in conjunction with home influences, be made well. If a patient says they cannot do a thing and the nurse or family, as in this case, says they cannot, the fact remains that they cannot will to do the things asked of them. When a suggestion is offered in this instance, one or more members of the family will firmly protest with: "Why, doctor, you don't know her condition. She has not been able to do so and so for years. She can't even start to do them." Talking to them privately does no good, you cannot get them to understand the true situation, and that she could be cured with their hearty cooperative influence, consequently she remains an invalid at the mercy of a sophisticated family—a counteracting agency whose combined influence no physician as yet has ever been able to overcome. I present these few cases, representing some of the extreme phases of hysteria, allowing for all the variable types to fill the intermedium. The subject is too elaborate for anyone to attempt to cover at a single effort, so I shall endeavor to give a few practical and helpful hints pertaining to the treatment most successful in my hands.

You no doubt have noticed in reporting these cases that drugs have been a conspicuously minor consideration. Not that I do not believe medicine has a place in the treatment of hysteria, but with drugs alone we can accomplish but little in the permanent cure of these cases. There are many patients suffering from nervous disorder, however, that need medical treatment and need it affluently. Such as tonics, alteratives, laxatives, diuretics and antispasmodics all of which are indispensable and aid much in the cure of certain primary conditions favoring an outbreak of hysteria.

In treating hysteria with the suggestive method a physician must (1) use tact, and (2) firmness. Tact is an unconscious feeling out our patient by mental touch as it were. As our



tactile sense is educated to discern shape, size and tecture of hidden objects as in palpation, so can mental tact aid the neurologist in the entricacies of his special line of work. There are instances when the physician must decide and that quickly, whether to treat lightly some particular symptom or to regard it with much seriousness. To decide between levity and gravity and to be able to make this decision beforehand is the happiest outcome of tact. Whatever abnormal physical condition coexisting, requires special attention, but the mental aspect is undoubtedly the most important and is the one calling forth the greatest precision in judgment and perception.

Firmness in handling nervous cases is a helpful adjunct. One may be too firm, however, but it is easier to fail in the former. The most successful management of these cases lies in the happy medium between the two. Being flexible in matters nonessential and inflexible in all important constituencies relative to the suggestibility of a patient suffering from either functional physical or mental disorder. Successful treatment of these cases is greatly handicapped if the patient has already met with previous failures at the hands of reputable physicians. Such failures always destroy, more or less, confidence in the medical profession and the sufferer looks on all physicians with an eye of suspicion. It requires strong suggestive assurance to reinspire confidence in the minds of victims of chronic hysteria. Suggestion has better effect when applied indirectly. If it can be covered up in objective treatment it will be more readily assimilated. Some are benefited by direct suggestion that they will rapidly recover after doing certain things or after taking a certain drug. I cured a case of chronic hysteria of several years' standing by telling the patient that I was giving her a solution of gold, which was true. I was giving her chlorid of gold and sodium, but the mere suggestion that she was taking gold had an immediate tranquilizing effect on her, curing her long before the drug had time to have any physiologic effect whatever. She continued the gold treatment for one year and to my personal knowledge, never had a return of the trouble. By conveying favorable suggestions to the patients mind we thus afford a rational prelude to an intelligent and legitimate cure. No method should be classed as trivial that cures our patient of a malady that has resisted all other means of cure.

After establishing fullest confidence in our patient then we may point out with comparative ease, the weakness and the folly of that character of mind furnishing the unconscious current of thought responsible for the disorder all through, and thus make the unconscious mind itself correct the mischief it has done and is

doing. No routine method can be adhered to with any degree of certainty, for each patient possesses an individuality peculiar to themselves, therefore, no stereotyped treatment will fill all requirements. We cannot adapt the patient to suit the remedy but must choose the curative means best adapted to meet the individual needs of a single case. We must remove the social thorns and thistles and all the vicissitudes of an irregular and inconsistent life, replacing with beautiful, sweet-scented flowers of human kindness, soul-soothing songs sung by sympathetic friends and all other favorable environments furnishing happiness and contentment to those suffering from mental and physical lassitude. Those suffering from shell shock in the recent war with Germany, which I believe is a form of hysteria due to extreme fear and excitement (*Hystero-Agitans*) were relieved of their violent emotions by soft melodies sung by nurses in attendance. A woman's sweet voice softly crooning the lullaby songs of their childhood, proved the best treatment for those poor fellows, because it furnished a mental diversion that could not be reached with medicine.

In conclusion let me say that practical experience is the wisest teacher in all matters pertaining to neurological research. First of all, we must show the very kindest and keenest regards for all moods and fanciful notions of our hysterical patients no matter how simple in character. We must teach friends and relatives to maintain a true, altruistic spirit toward a subject of hysteria. We must diligently seek to free unfortunate victims from public ridicule and condemnation by educating the popular mind away from ancient ideas closely allied to witchcraft of the dark ages, teaching it to recognize hysteria as a real nervous malady, a potent disease of the subconscious mind of an unconscious nature. When we have accomplished this then, and only then, will the knowledge and treatment of hypsteria become simplified and classified among the many ailments amenable to methodical medicine.

The range of mental therapy is wide and by no means limited to hysteria alone. All physicians, legitimate and otherwise, use it in most all cases treated. If a physician was called to the bedside of a patient and prepared a medicine or wrote a prescription for same and said to the patient: "Here, take this, it will do you no good, but take it just for the sake of taking something." If the patient took it all, unless it be a drug with a profound specific action, it would have but little or no effect. But how different when given with confidence and with the consoling assurance that it will cure you or it will help you without a doubt. In treating diseases by mental therapy, the first thing to do is to remove from the patient's mind

all evil suggestions, replacing with good and wholesome ones. If mental anxiety can produce an ideal disease or disorder, why not a rational cure be found in bringing ideal centers into play in accepting healthful suggestions sufficient to reestablish a normal status of a deluded physical and mental mechanism. This psychic treatment has a negative and a positive side. The negative consists in removing from the patient's mind all causes for despondency and injurious mental influences, the positive by infusing into the patient's mind curative mental influences, such as hope and healthful ideas, which tends to counteract abnormal or morbid mental action. Mental disorders require mental medicine. Insanity cannot be cured by medicine alone. Alienists have long ago discovered this fact when they demand not only isolation but seclusion of their mentally deranged patients with certain kinds of suggestive healthful environments. Hysteria is much like insanity so far as pathological factors are concerned. We cannot put our finger on the positive or visible causes of many cases of insanity, especially acute mania. Epilepsy is another malady due to a hidden force which we are unable to locate beyond a few exciting causes. Hysteria is likewise due to an unknown quantity and quality of nerve energy the true etiology of which still remains locked in the archives of medical lore, therefore, we know of no drug, as yet, having a specific influence over the remote neurosis responsible for this secondary nervous manifestation called hysteria, hence we must be contented to use that means affording best results regardless of simplicity or unscientific in characteristics—let us continue to use the best we have until something better is presented.

#### DISCUSSION

DR. M. A. BLISS, St. Louis: When this war came none of the nations engaged in it had ever before realized the importance of neuropsychiatric examinations. None of the old army blanks, previous to April, 1918, contained any reference to lesions of the nervous system. They contained a space in which to enter observations about hernias, pains in the joints, eyes, teeth, etc., but nothing about the nervous system. It soon became apparent that nearly 20 per cent. of casualties were either nervous or mental cases, and it aroused this nation to the importance of immediately instituting this work in the draft boards. None of us knew anything about it. It all had to be learned from the beginning; there was no guidance for us. The instructions issued by the Surgeon-General's Office were as wise as could be devised at the time, but every man who worked on a draft board or advisory board or recruiting depot, or examined these cases in hospitals, had to learn his job as he went along. We no doubt made many mistakes; we could not help but do so. Even after we began what we called "systematic" examination we must have sent over a good many unfit men. The rush of the examination was very great. I saw them put through 3,194 in twenty-one hours, with two men examining in neuropsychiatry, and you can understand how thor-

oughly an examination could be made at that rate. That was not because the men were slack, not because they did not want to do the work better and take more time, but of course, it amounted to very little more than inspection. When we were able to control the rate at which they should be made, we made more careful neurologic and psychiatric examinations. But really the only way to arrive at the psychiatric side of these men was to sift out what you could, and then send the men to a detention camp for a period of time, where it could be determined whether they could be made into soldiers or not. As it turned out, no doubt our activities often failed, and there was very much to be discontented about. But we did the best we could.

DR. F. M. BARNES, JR., St. Louis: The subject of feeble-mindedness by itself would be enough to occupy more than my allotted time, but when you add to that hysteria, you have a much larger proposition than one can handle in a few minutes.

To take some of the things mentioned by Dr. Harris. In the first place, he did not attempt to define definitely what we mean by feeble-mindedness. It is true that to a certain degree we can recognize feeble-mindedness by certain empirical tests. Of these tests, should be mentioned two types, the Binet-Simon and the Yerkes point scale. By the application of these tests we can at least recognize many of the feeble-minded and often we can protect them and the community by getting them into an institution before they come within the purview of the law. I do not mean to imply that any one of these schemes is by itself final. We must in addition consider the whole individual and his surroundings. This is as much true of feeble-mindedness as of other mental conditions.

The question arises whether or not feeble-mindedness has been considered in this paper in the narrow sense, as a lack of development, an amentia, if you will, or whether certain secondary conditions resulting from psychoses, dementias, in other words, have not been mixed in. I am sure that is done too frequently. I am sure more room might be made at Marshall by removing some of the demented to the State Hospitals where they belong. What the economic side of the question is I do not exactly know, nor will we find out until we know what we have in the state. This bears directly on the resolution which was approved by this body yesterday, namely, that we should have a survey of the feeble-minded and insane of the state made, determining just how many feeble-minded persons there are and what the condition of their housing and treatment may be. Until we get that information we cannot conceive the magnitude of the problem with which we are trying to deal; we are working in the dark; we cannot gain success.

Regarding the question of hysteria, I am impressed with the fact that Dr. Lockwood took into consideration almost the entire gamut of psychiatry. I think pure hysteria is a rare condition. I seldom see it myself. We are too prone perhaps to see a patient with certain symptoms which are hysterical of you will, and make this the diagnosis. The point is that hysteria, if we use that term with some limitations, is but a reaction, fundamentally a reaction of a psychopathic constitution. The manifestations which hysterical persons show are nothing more than evidences of such reaction; they are not fundamentally a disease. You may inhibit this reaction by suggestion, which is the treatment, of course. It is difficult, however, to say that you have thereby cured the patient. You are not going to change that patient's constitution or underlying fundamental state which makes hysteria possible.



# EAR, NOSE AND THROAT SERVICE IN A BASE HOSPITAL\*

STANLEY S. BURNS, M.D.  
ST. LOUIS

This paper is read merely to give an idea of the amount and kind of work encountered in thirteen months of ear, nose, and throat work in a base hospital in this country.

The work began with the opening of the base hospital and extended until October, 1918.

There were three radical mastoids performed. In November, 1917, the section of surgery of head, Surgeon-General's Office, advised that no more radical operations be done. Patients with chronic suppurative otitis media were discharged from the service.

There were forty-six simple mastoid operations, four of which were performed under cocain and adrenalin ( $\frac{1}{10}$  of 1 per cent. and 1 in 10,000), on patients with conditions contra-indicating ether anesthesia.

Paracentesis for acute otitis media was performed 124 times, using an anesthetic composed of equal parts of menthol, phenol and cocain. Fifty-six cases were incised and drained for furnucle of the external auditory canal.

Nine polypi were removed from the middle ear. Three cases were operated on in which the polypi protruded from the external auditory meatus.

Nine foreign bodies were removed.

Impacted cerumen was removed from 250 cases.

One case of postauricular dermoid cyst was operated on under local anesthetic.

*Nose.*—Submucous resection for deviated nasal septum was done on 296 cases.

Turbineotomy for hypertrophied and bullous middle turbinates 55 cases.

The ethmoid cells were exenterated in 31 cases for chronic ethmoiditis.

The sphenoid sinus was opened and drained in 12 cases.

The septum (nasal) was cauterized for epistaxis in 46 cases.

Fractured septums were reset in seven cases (acute).

Puncture and drainage of the maxillary sinuses was performed on 39 cases, some requiring several punctures before all pus subsided.

Radical operation for chronic maxillary sinusitis was performed on 4 cases—using the route through the canine fossa.

The intranasal route for drainage of chronic maxillary sinusitis was chosen in 6 cases.

One case of complete and one case of partial bony occlusion of the posterior choanae were operated on.

Nasal polypi were removed in 52 cases.

Two cases of supra-orbital abscess were drained.

Two foreign bodies were removed from the nose.

The inferior turbinates were cauterized (electrocautery) in 30 cases.

Two large warts were removed from the nose and one case of traumatic septal abscess was drained.

*Throat.*—Tonsils were removed in 1,192 cases; adenoids in 90 cases.

Three hundred and eighteen peritonsillar abscesses were incised.

Three papillomae were removed from the uvula and one papilloma removed from the tongue.

Four foreign bodies were removed from the trachea and two cases were operated on for papilloma of the vocal cord.

One case was operated on for bony exostosis in roof of the mouth.

*Brain.*—Three cases of brain abscess were operated on with one death. The patient that died was operated on and a large abscess in the temporal lobe was drained. Necropsy revealed a much larger abscess in the frontal lobe, same side. Of the others one was a cerebellar abscess and one a temporo-sphenoidal abscess.

One case was operated on for patency of the lower end of the thyroglossal duct.

Twenty-five thousand one hundred and forty-one treatments were given in the clinic, 136 applicants for the aviation service were examined by the existing requirements (Barany tests as standardized by Jones) and 88 nurses were examined for overseas service.

Humboldt Building.

THE St. Louis Board of Education is carrying the schoolroom to the hospital bedside for crippled children. Heretofore when children of school age were kept away from their studies through injury, no attempt was made to give them instruction in their school work unless the parents voluntarily tried to do it. This meant that the children dropped back in their classes, especially when the absence was prolonged. Recently the school board with the cooperation of the superintendent of the City Hospital at St. Louis has provided teachers to go to the hospital where crippled and injured children are confined and give daily lessons that will keep them up with their classes until they are able to attend school again. In addition to this important nature of the work the diversion will act as a tonic and keep the little ones more bright and cheerful.

\* Read at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.

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OF THE  
**Missouri State Medical Association**

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FEBRUARY, 1920

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**EDITORIALS**

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CHILD HYGIENE IN MISSOURI

Health officers, mothers and educators throughout the country are watching with peculiar interest the health survey and demonstration undertaken by the United States Public Health Service in several localities in Missouri, by which it is hoped to establish standards for child hygiene work in the school and home. No little of the interest centered about the selection of Missouri as the field for this work, and many inquiries have been directed to the Public Health Service as to the reason for doing the work in that state, so it might be well to answer them in this way:

Conditions in Missouri are simply typical of the average American community, no better or worse.

The state of health of the child in Missouri may be safely accepted as the state of health of children throughout the United States.

These, however, are not reasons why some other typical American community was not selected. The real reason is that the legislature of Missouri, at its last session, created a department of child hygiene and the Missouri State Board of Health adopted resolutions asking the Public Health Service, the only federal agency authorized to cooperate with state health authorities, to come to Missouri and make a demonstration of how this department could best function. This was supplemented with an invitation from the governor and several volunteer agencies. The Public Health Service eagerly accepted the invitation because in Missouri the machinery was in readiness and numerous agencies offered their cooperation, both financially and with trained personnel.

Here, then, was every opportunity to make a really comprehensive study in child hygiene, one that would be most thorough, reach the largest possible number of schools and homes and establish the most accurate findings.

Primarily it will benefit Missouri first. The health condition of thousands of children will be studied by highly trained experts. Recommendations will be made to the parent and the

teacher in cases where it is found that conditions need correction. Where necessary, glasses will be fitted for the eyes, the teeth will be looked after and mentally backward children classified so that proper corrective measures may be taken.

The study will not cover the whole of Missouri but will have to be confined to those communities which offer the best prospect of putting the work on a permanent and self-sustaining basis. It is not possible to say how much money will be expended but results and not expense will be the chief consideration.

The prospects for achieving results of lasting value are excellent for the work is in the hands of experts. Dr. C. P. Knight, of the Public Health Service, is in charge, assisted by Dr. Lydia A. DeVilbiss. Moreover, the cooperation of all official and unofficial health agencies is assured. The working staff is made up of specialists in the different branches of medicine, nurses, field workers and clerks.

The set purpose is to conduct a comprehensive field investigation and demonstration in child hygiene along modern, scientific lines. In addition to this it is planned to organize a division of Child Hygiene within Missouri's State Board of Health and to assist and encourage local child hygiene activities. Much of this work will be in the nature of a demonstration, not only for the people of Missouri so that they may see the benefit of such work and make it state-wide, but for the country at large. It will tend to establish Missouri as the model state for such work and set standards to be followed by other states.

Studies in particular phases of child hygiene have been made before in the United States, but usually they have been limited in their scope and territory. Thus, in a limited group of school children the percentage of children with bad teeth, defective vision, or mental affliction, has been ascertained. But even here little or nothing is known of the environment from which these children came. The present survey will go much further than any other study along these lines.

As a first step, field agents of the Public Health Service will make a house-to-house canvass in the localities selected. A physician and public health nurse will visit each home where there are children of the preschool age. In all child hygiene work the first essential is that all births be registered. In many communities in the United States less than 70 per cent. of the children are registered. So the first work in the community will be to determine what per-



centage of children in the preschool age group have had their birth recorded. This is intended to stimulate birth registration and give the health officer absolutely necessary information. At the same time the health conditions of children in this community will be studied and the children will be enrolled. Infant health stations will be established and for children needing medical attention treatment will be made accessible. Prenatal supervision will be provided wherever it is possible or desired, for this has been proven to be of inestimable value in reducing maternal and infant mortality.

School children will be inspected and a card will be filled out for each child, giving a brief health history and recording his physical and mental condition. Where necessary, suitable treatment will be recommended, and facilities will be provided to make such treatment accessible. The height and weight of each child will be recorded each month. Correct food and exercise will be suggested for the under nourished children and health classes will be conducted. Each month it will be possible to observe the progress of this work.

It is a firm belief of the Public Health Service that not only can thousands of lives be saved in this way, but that a great many of the physical and mental handicaps which follow the boy and girl through life may be removed at this early age by adopting proper corrective measures, and that the coming generations may be made correspondingly stronger and the stamina of the nation greatly improved.

In conducting the demonstration in Missouri each community will be asked to make the work permanent, particularly that part of the work which provides for a health officer continually on duty in each community, and for the regular examination and treatment of the children.

If it proves successful in Missouri, as it gives every promise of doing, other states will undoubtedly be glad to adopt the same system.

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#### SIR VICTOR HORSLEY AND NEWSPAPER INTERVIEWS

In a book of outstanding merit that has recently come to our desk—"Set Down in Malice," by Gerald Cumberland\*—we note some interesting paragraphs on Sir Victor Horsley which have held our attention. These paragraphs are written by a literary man who, we take it, has only a limited knowledge of medicine but who nevertheless is gifted with the sort of judgment

that spells sanity opposite medical problems and makes for the correct interpretation of the words as they fall from the lips of a medical man whose utterances are untinged by exaggeration or the desire to shine in a daily paper as something sensational. The paragraph which impressed us to the greatest degree, runs as follows: "I do not think I ever met a man more careful to express his exact meaning; he appeared to have a horror of exaggeration and he qualified nearly every statement he made. In discussing scientific subjects such scrupulous carefulness is, of course, not only wise but necessary, and when, later on, I wrote a newspaper article on the effect that the strain and horror of the war have on the human brain, Sir Victor showed himself very anxious that in quoting his views, I should do so in language that could not possibly be interpreted in two different senses."

The foregoing paragraph has caused us considerable thinking if not deep cogitation on how an interview with a physician should be conducted by the interviewer and the importance of the person interviewed to express only the ideas which he desires to have incorporated in the newspaper article. It has been unfortunate, especially in this country, that the interviews with medical men of standing which appear every now and then in the daily press are not of a high standard as regards being an exact reflection of the thought the medical man interviewed wished to convey to the public; but even though it might be said that the interviewer is generally to blame for the garbled version, the one interviewed is not altogether in the escapable class when criticism is in order. Sir Victor Horsley, as emphasized by Gerald Cumberland, was most careful as to his utterances—the interview was on the subject of shell shock—and most solicitous that his thought, as expressed by him, should be repeated verbatim in the published interview. Our medical men are often just as careful as to what they say to an interviewer and are just as insistent that their thought should be clearly stated with no "trimmings" on the part of the interviewer. But they are not always so; and the result is that the interview is an exaggerated statement that bears small resemblance to what has really been said by the medical man. Interviewers on most American newspapers are out for sensational matter; the American newspaper, except in exceptional cases, wants something that will make its readers sit up and take notice. The sane, the unexaggerated, the precise, and the unsensational attitudes are not greatly encouraged by

\* Brentano's, New York.

the powers that be; hence the interviewer, no matter what his receptive mind has gathered during the interview, is likely to overlay his article with his own thoughts, his own inferences.

In accepting the foregoing statements as a warning as to how careful the medical man interviewed should be in the presence of all interviewers, be they of modest demeanor or of a decidedly bumptious makeup, some of the criticism we have visited on the interviewer applies to the medical man interviewed. In a number of instances he too has an imagination that needs curbing, he too talks too much about his great achievements, and occasionally makes personal remarks about others who are working along the lines which are engaging his thought, which should never be made. Granting that he is human and has the weaknesses of the strong and the few strengths of the weak, there is one thing that he should not forget and that is, that no matter how important his work is or how desirous he is for full recognition, the daily press is not the proper medium. As medical men we are given to blame the press for its divagations from the standard of truth, and very often our criticism is severe and drastic, but as medical men we know that not seldom the medical man is not above reproach. Sir Victor Horsley is an example for all medical men who are subjected to interviews, and if each and every one would imitate him, we would no longer be the victims of the bickerings between the medical man who has been interviewed and the paper in which his interview appears.

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### FOLLOWING THE PATIENT HOME

We recognize that the causation of disease is to a large extent environmental. A man whose limbs are often cold and wet is liable to catarrhal disorders and arthritis; the stone cutter and others who work in dust are especially liable to pulmonary tuberculosis; the boiler maker develops a peculiar aural condition.

Large general hospitals and clinics during the last two decades have generally become dissatisfied with efforts to treat disease for a few minutes a day or for a few days a week during a year, then allowing the patient to return to the old environment which was wholly or partly responsible for the disease. At first the visiting nurse was instituted to help solve these problems. She followed the patient to his home, gave such care as was necessary there, instructed the rest of the family in the particular

means for aiding in the restoration of the patient's health. The work of the visiting nurse as such was of tremendous benefit but even this was found inadequate and the social worker became a regular adjunct of such institutions. Perhaps she too had been a nurse but her work now consists in investigating social and economic factors in the patient's illness, in bringing this information to the physician and under his direction taking such steps as are feasible to modify the environment so that the convalescent may not fall speedily ill again; or if that be impracticable, she assists in arranging through suitable family, community, or other agencies, to place him in a new environment.

If pulmonary tuberculosis is an affair of environment, how much more frequently must we charge to a patient's surroundings the causation of mental disorder. Let it be granted that some subjects withstand the most unfavorable environment and never lose their balance, but we are not all of such sturdy material and our surroundings affect our spirits in no small degree.

If, then, a general hospital finds aftercare of its patients necessary, much more should a special hospital for mental disorders take the necessary steps to follow its paroled and discharged patients into the habitats in order to exercise a degree of protection and assistance that will assure the continuance of whatever improvement has been attained. It cannot be doubted that relapses are often preventable. A person of sensitive temperament has a considerable inner struggle to adjust himself to his friends, neighbors, work, and interrupted plans, even when a high degree of sympathetic appreciation of his difficulties is displayed by those about him. Some patients go into less sympathetic surroundings and the question of continued health or return of disorder may be settled by the assistance that the hospital gives through its after-care agent.

It is the general experience that work so started soon expands and the hospital is able to extend its help not only to former patients but to others whose lives may be set right by wise counsel at a critical time.

This aftercare work costs a few dollars for an intelligent worker's salary and traveling expenses. No one is able to calculate just how many dollars are saved by preventing loss of time from work and cost of maintenance in institutions nor have we any measure for the amount of misery prevented and the amount of happiness bestowed. Certain it is that money thus spent has proved a wise investment wherever it has been made. Mental hospitals having



once intelligently adopted the policy of following their patients so long as help is needed show no disposition to take a backward step. They even find that it is possible to parole a few more patients because continued supervision is possible. Nothing that a hospital can do wins more grateful appreciation.

It is to be hoped that the institutions of this state that care for mental disorders may not long delay in taking up at least so much of social service as is implied in the term "after-care." They will find themselves more highly thought of by the communities they serve and better able to meet its needs.

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### DR. CARREL SPEAKS

Dr. Alexis Carrel's words of warning in a London daily just prior to leaving for the United States to resume his former position at the Rockefeller Institute should give us pause, for they are fraught with a number of lessons which we Americans ought to take to heart. In speaking of the scientific work as it obtains in France today, Carrel says that progress is impossible since it is impeded by rules and regulations which are out of consonance with progress as we understand it today. Powerful schools and castes have been formed which admit only those who bow in advance to their wishes and views. Barriers are set up which are insurmountable obstacles to the performance of original work instituted by men of independent thought. Only the elect are welcomed and encouraged by the Faculty of Medicine, the Pasteur Institute and all the other important scientific establishments, but the unknown quantity, in the shape of a man with ideas that are opposite to the teachings of these bodies, is thrust out in the cold. The result is that today in France science has become sterile. Dr. Carrel winds up his uncomplimentary remarks about the deplorable conditions in France, by asserting the necessity of demanding the resignation of several professors and in their place substituting those men of original thought, especially the younger men, who during the great war gave evidence of being possessed of outstanding qualities, in fact, of genius.

We Americans have always thought we were extremely lax in our methods of conducting our medical schools and our scientific establishments; and that we were lax is so well known to us that we are quite ashamed of what we permitted and encouraged by silence in the past. But though our laxity was most deplorable, now

that the pendulum is swinging the other way—and most fortunate for us, it is swinging unremittingly—it would be well for us to heed the telling words of Dr. Carrel as they apply to France. Having been among us for a number of years Carrel evidently realizes how great is the error in his former country today, and how much France would profit if the freedom of thought that is inherent in the best sort of Americanism would be acquired by that country. This must have been the case, for when Carrel came to this country he was a dyed-in-the-wool Frenchman, with all the small prejudices against us peculiar to all educated foreigners.

If a man of Carrel's caliber sees the mistakes which arise from too much conservatism in science, and he sees this because of his present cosmopolitanism, we shall not err if we too allow our minds to cogitate the matter, to the end of realizing that the phase through which we are passing today—conservatism in medicine—is a compound of perfections and imperfections. So long as we encourage only the perfections and ignore completely the imperfections, the compound will work without a clog to the wheels; but directly we make much of the imperfections we shall pass swiftly into the state in which France is today. And because we are always enthusiasts when something new comes our way—our present conservative attitude toward medical science in this country is comparatively new—we ought to stop and think of the dangers ahead. These can be obviated by sanity and a just appreciation of what others are doing, by a mentality that is broad and receptive only of matters of sterling worth, by the one thought that originality should not be decried just because it has the habiliments which are foreign to our daily observations. By heeding these warnings sterility will not stalk into our House of Science and destroy that which we have builded so well during our years of conservatism.

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### SIR WILLIAM OSLER: AN APPRECIATION

If you were asked what Osler means to you, what his strivings and achievements mean to you, no doubt you would hesitate in expressing yourself. You might say that his name has been one of such prominence that not to mention it in connection with a discussion of modern medicine would be a great mistake, and you might say that he had written a book entitled,

"The Principles and Practice of Medicine" that is your medical Bible. But of his varied talents, of his endeavors in nearly every province of medicine, short of surgery, of his literary talent and of his extraordinary working capacity the outcome of a mentality that seemed to have no bounds—of these salient matters we are sure you would not be cognizant. And that he stood for the best in medicine as a man of culture and of the keenest intellect, that he stood for the advancement of the "plain man" who had talent, that he represented to society at large the best expression, not only of modern medicine but also of what should constitute the modern physician, are points it would be well for all to remember, in fact, enshrine in their memory, so that when the opportunity arises to profit by his example there will be no half-hearted attempts to live up to the great lessons his life teaches but whole-hearted attempts to follow in the steps of this master.

Modern medicine has its commanding figures: its men of high worth and its successful men. It has advanced by long strides in placing the science of medicine in a sphere which it never occupied before; it has formulated and arranged and docketed the things worth while and uprooted and cast aside the weeds. It has also taken the science of medicine out of its somewhat medieval groove and hoisted it into an atmosphere of sanity and clarity. This is the greatest performance to be credited to modern medicine and it is so great that we of today, being so near the movement, cannot appreciate it as we should. Future generations no doubt will write appreciative criticisms of the men who were at the helm of the ship that furrowed without let or hindrance the waves, despite the occasional rocks, and brought the ship to port in safety. As Jules Lemaitre says: "Criticism of our contemporaries is not criticism—it is conversation." Nevertheless, we feel sure that in the case of Osler future generations will not greatly modify our opinion.

Of all the men—and now we are speaking only of the men in England and America who stood at the helm—the one with the clearest vision was Osler. He saw the Promised Land when others did not; and he saw it because of the gift of genius. To forevision anything is the highest type of genius: it is clairvoyance in its best estate. We may decry genius as much as we please; place it in the category of the abnormal; demean it by saying that it is nothing but untiring labor. But despite these animadversions we must recognize the fact that on account of its rare appearances in this world

and on account of its elusiveness when it is a matter of defining or cataloging it, there is really such a thing as genius and that it raises the possessor leagues above the crowd and makes of him a man apart. And Osler stands today leagues above the crowd of the rank and file in medicine: a prophet with no mysticism but with an acuity of vision that made him see sanely what others deciphered only partly, if at all.

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## OPINION AND CRITICISM

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### A. M. A. AT NEW ORLEANS

The coming session of the American Medical Association at New Orleans is attracting the attention of an unusually large number of our members due to the nearness of the city to our state and to the alluring influences that pull one toward its hospitable borders whenever an occasion arises that will give the physician an excuse "to get away for a few days." With the new arrangement of the scientific work in the association, permitting social and recreational visiting without sacrificing attendance at the sections, and the numerous avenues for indulging one's curiosity and crave for the old and picturesque in the famous city, the attendance at New Orleans bids fair to equal that of any previous session. Perhaps the railroads may regard the convention as an educational or philanthropic one, or something under the rule that will permit a reduced fare for the round-trip if government control continues to the date of the meeting. The cheaper and novel method of transportation by boat from St. Louis and other river points will not be available; at any rate not from St. Louis. In response to several requests for such an arrangement we were told, when we inquired about chartering a steamboat, that the project was impractical on account of an insufficient number of river boats due to the loss of several steamers in floods and ice jams and the inability of builders to replace them with new ones since the close of the war. This is a disappointment to many members who had planned to make the trip on the river.

The Tulane University School of Medicine has provided splendid rooms for the headquarters section of the Association—the registration bureau, the scientific and commercial exhibits, and some of the scientific sections—in the beautiful and commodious Josephine Hutchinson Memorial Building. General headquarters will be at the Grunewald Hotel.



## TRACHOMA MENACE

Even the families of physicians where ordinary hygienic precautions are denied do not escape the inroads of sight-destroying trachoma. It is said of a certain physician when his attention was called to the sore eyes of his children, that he replied: "Sure, Sal's got sore eyes; so has John. Let them alone; they'll get over it." One can readily imagine the pitiful condition of the people of such a community when the supposed guardian of their health so woefully lacks discriminating knowledge of his duties. It is well known among physicians and workers to prevent blindness that trachoma has been increasing in Missouri and an appeal was made to the United States Public Health Service recently for assistance in controlling the condition. In response to this request the Public Health Service has detailed Dr. R. W. Raynor to make a survey of a number of schools in the southeastern section of the state. As was to be expected, Dr. Raynor found a large number of trachoma cases in schools in that district which confirmed the belief that trachoma is on the increase in Missouri. Every physician in the southeastern section of the state is urged to cooperate with Dr. Raynor and assist in discovering all cases of sore eyes so that the actual number of trachoma cases may be ascertained and proper measures taken for their care and cure where possible and the prevention of new cases.

One of the most prolific means of spreading trachoma is the common towel—the roller towel in homes, schools and hotels. There is a law against the use of the roller towel in hotels, schools, and other public buildings, but the enforcement of this law is placed under the control of the hotel inspector, not under the state board of health where it belongs. The hotel inspector is provided with few assistants and limited funds, consequently inspections of hotels when they occur at all are cursory and incomplete. Probably not more than two inspections a year can be made of the hotels in the towns outside of St. Louis and other large cities which have local ordinances governing this important subject. In consequence, the roller towel is in constant use in schools and hotels and the transmission of infected material from persons with sore eyes to persons with well eyes goes merrily on without let or hindrance.

County medical societies could make this subject one of their activities by warning the people from time to time of the dangers of the common towel, particularly as to eyesight. It would be

within the proper scope of the county society to publish in the county papers a well prepared statement on these dangers so that by constant repetition of warning the people would be induced to dispense with the disease-spreading roller towel in public places as well as in any home where there is a case of sore eyes.

## TRIAL BY JURY

The government's case against the Monsanto Chemical Company of St. Louis ended as we thought it would—seven to five for conviction. When we say that our forevisioning was verified, we do not wish to cast any reflection on the jurors or on the experts who testified on behalf of the government. Both jurors and experts are to be complimented—the former for illustrating that the mental capacity of an ordinary human being has its limitations and the latter for the earnestness and single-heartedness with which they gave their testimony. But though praise should be meted out to all those who had the interests of the government at heart, there is one point that should invite attention at this time so that a lesson may be taught experts as to the best way to convey their knowledge to jurors who are generally what may be called "men in the street" with a decidedly limited idea of the inner workings of the laboratory in its best estate. The juror's patience is the patience which is characteristic of the everyday man and his brain is soon put into a turmoil when it is circumvented, without a moment's surcease, with technical terms which even to the ordinary physician are a bit confusing. Not only is the much-belabored juror, fresh from his desk whereon were the usual business letters and figures for calculation, compelled to tackle the problems as set forth by experts who have the stamp of approval from the medical profession, but he is the "victim" of expert testimony given by "the other side," and which is presented with a certain glamour and occasionally with a degree of sympathy so as to enlist his attention to the extent of interesting him on behalf of a company that is the "object of undue prejudice."

In the case of the trial just closed, the salient feature to us was the sore-perplexed juror. What must not have been his dreams after he wooed and won sleep and what must not have been his thoughts on awakening in the morning! He went to bed, let us say, in the best of spirits, and before falling off into sleep vowed he would obliterate the disturbing element which had upset his routine thought during the day, only to

be assailed, shortly after dropping off into the abyss, by strange and distorted pictures of men working in laboratories, and by the complexities of the good and bad points of saccharin. No doubt he said "food" so often that it soon sounded to his near-somnolent brain like "fool," and then the torture began as to whether he himself was "food" or "fool." Fortunately this state of unrest did not last and he soon passed into complete forgetfulness of this intricate problem. But in the morning there was a repetition of the scientific talk, and again he was told to pay attention and drink in the fund of knowledge that was being spread before him for his edification. Did he rebel? No, he was the perfect juror who was willing to listen, willing to digest, willing to arrive at the right conclusion. But he forgot that the human brain, though a remarkable organ, can do a certain amount of work and no more, and not only did he forget this very important matter, but the men who testified forgot it and went on merrily with their results in the laboratory when experimenting on animals and their results as their observations taught them in connection with certain patients who had been subjected to saccharin. Hence, all honor to the jurors—we are now referring to the seven who were for conviction—and all honor to them for having thought as clearly as they did. That they had enough mentality left to formulate a decision as well as they did, goes to show that even the most tortured brain gets back into its own state directly the torture is removed.

And here it would be well to emphasize the importance of having special jurors in cases similar to the one which is the subject of this editorial. No juror except one equipped with a full knowledge of the subject is capable of exercising judgment; in fact, to arrive at an unbiased opinion the jurors should be experts on either side. Then, and then only, would the matter whether a drug had been misbranded be properly apprehended, the pros and cons duly weighed, and judgment passed on the extent of the infraction against truth. This may seem Utopian to some of our readers, but nevertheless it would be a step in the right direction, for it would serve a double purpose: it would relieve the greatly perplexed man in the street from worry and from criticism, and it would make clear to the people at large that a conviction or the opposite is the outcome of the thought of scientific men who have their interests at heart in the matter of health.

## BOOKS FOR LEISURE MOMENTS

*Reading with discrimination broadens the mind  
and strengthens the mental grasp*

W. H. HUDSON, whom Galsworthy discovered for us and for which we are deeply grateful to the English novelist, is always worth reading, and even though his latest book, "The Book of a Naturalist" (George H. Doran Company, New York), is not the equal of "Green Mansions" it nevertheless has much to hold the reader's attention. Hudson is the lineal descendant of Gilbert White, speaking in a literary sense, for he combines the same literary charm and the scientific bent of mind. His nature books are far above the nature books written by the penny-a-liner who, though he may be a keen observer, lacks the required knowledge of the botanist and zoologist which is absolutely necessary if a writer wishes to carry conviction to his readers. Now Hudson has this knowledge to a high degree, and what with his art of hiding the pedantry which is so characteristic of textbooks on botany and zoology and which is for all who are not experts in these two studies a bore; and what with the charm of a style of writing that awakens at once an interest in everything he writes; he evolves material in all his books that is unique at the present time. As the right sort of educator Hudson stands supreme, and the reader who is not held in thrall by his nature studies cares not a whit for nature and is a facsimile of Peter Bell, so graphically described by Wordsworth. When mention was made that Hudson's latest book is not the equal of "Green Mansions," no drastic criticism was meant: "Green Mansions" stands apart and none of Hudson's other books, good as they are, comes up to this masterpiece. A series of essays, this book is on subjects which range from "Bats" to "The Potato at Home," and includes delightful and instructive papers on serpents, hawk-moths, herons, squirrels, etc. The art which Hudson possesses is the art that almost astounds us, for it is a compound of science and literature carried to heights which are surrounded by the clearest atmosphere through which even the ignorant can discern with ease the simplicity of his phrases and his taking presentation of scientific subjects.

P. S.

"ARMY PHYSICAL TRAINING," by Col. William H. Waldron (Henry Holt and Company, New York), commends itself on account of its simplicity. The rules laid down by which physical development can be achieved are the rules



followed in the United States Army. And simple rules they are, so simple that everyone who is desirous of undergoing "a slight inconvenience" daily by indulging in body movements, need not worry lest the result will spell failure or his mental equilibrium will be upset through a feeling that perhaps he is overexercising. No dumb-bells or Indian clubs are "prescribed" by the author: only movements which are easy of performance because they lack the usual complications inherent in most instructions and because they are not done in excess. Of all the books which have come to our desk on the subject of "physical culture," Col. Waldron's little book stands at the head on account of its practicality and its lucid instructions. In fact, nearly all the other books we have read on this subject are bugbears, since they affright the reader because of their involvement of phraseology and their enervating exercises. P. S.

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## NEWS NOTES

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SEDALIA has voted to erect a \$100,000 city hall and a \$10,000 hospital for negroes.

DR. DELAMATER, health officer of St. Joseph, says the city had fewer cases of contagious disease in December than ever before recorded for that month.

MISSOURI University students and alumni are contributing funds for a tower to cost \$500,000 as a memorial to the students and the alumni who served in the world war.

DR. W. D. FULKERSON of Trenton, for thirteen years local surgeon for the C. R. I. & P. Railway at Trenton, has resigned and plans to retire to a farm near Keytesville, Mo.

A NEGRO in Chillicothe robbed the offices of several physicians of quantities of cocaine and morphine recently, and in one case also stole the purse of the office girl. The thief was arrested.

CLINTON COUNTY MEDICAL SOCIETY has raised its annual dues to \$5; Greene County Medical Society has raised its annual dues to \$6; Jackson County Medical Society has raised its annual dues to \$12.

DR. FAYETTE C. EWING of Webster Groves has moved to Alexandria, La., and has been appointed chief of the eye, ear, nose and throat department of the U. S. Public Health Hospital, the old base hospital, where he was located during the war.

WASHINGTON UNIVERSITY MEDICAL SCHOOL has established a course of graduate instruction in pediatrics which will undoubtedly prove very attractive to physicians in this section of the country. The course begins April 5. For further particulars see their advertisement in this issue.

DR. ALES HRDLICKA, Curator Physical Anthropology U. S. National Museum, Washington, D. C., was the guest of the St. Louis Medical Society at a special meeting held on Saturday, January 3, where he delivered an address on "The Relations of Physical Anthropology to Medicine."

THE Virginia Medical Association has increased the annual state assessment from \$2 to \$4. The association has purchased the *Virginia Medical Monthly*, formerly owned by Dr. Landon B. Edwards of Richmond, which will be the official organ of the association and carry only ethical advertisements.

THE school board of St. Joseph has appointed Dr. L. C. Gartin, a dentist, to be a director of dental prophylaxis and oral hygiene for the public schools. A dental clinic will be established in connection with the medical clinic of the public schools where the teeth of school children will be examined and corrections recommended in those cases needing attention.

THE Marine Hospital at St. Louis has outgrown its facilities to care for the sick soldiers, sailors, and marines, according to the published statement of city officials, and they have made an effort to induce the United States Public Health Service to introduce a bill in Congress providing for an appropriation of \$1,500,000 to construct and equip a new marine hospital in St. Louis.

COL. H. A. METZ, president of the H. A. Metz Laboratories, has donated the necessary funds to the Volunteer Hospital of New York, for the installation and development of a uro-

logical and syphilological department, both in the hospital and its dispensary. This donation by Colonel Metz is in keeping with his action in developing a large scientific organization in his laboratories in Brooklyn, where he has on his staff a number of eminent biologic and physiologic chemists who are engaged in research work.

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THE following were examined before the State Board of Health at Kansas City, on October 7, 8 and 9, 1919, and granted Missouri licenses to practice: Vernon Alexander Ayer, Kansas City; Edw. Sherman Baker, Kansas City; LeRoy Branom, St. Louis; Milford D. Brooks, Kansas City; Carl Roscoe Burkhead, Kansas City; Harvey Oscar Daniel, Kansas City, Kan.; Stanley L. Green, Independence; Clark Homer Hall, Kansas City; Louis Grayson Harney, St. Louis; John Ottoway Henley, Kansas City; Earl Hartle Horner, Olney, Ill.; Edwin Lawrence Hume, Bloomfield; William Welles Hoyt, St. Louis; Robert Jansen, Great Lakes, Ill.; Mary J. Lower, Kansas City; Samuel R. McCracken, Smithville; W. A. Miller, Liberty; Kelly D. Robinson, Kansas City; David E. Schmalhorst, St. Louis; Kenneth B. Uhls, Overland Park, Kan.; Alex Van Ravenswaay, Boonville; Theo. S. Van Ravenswaay, Boonville.

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SINCE November the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

Nonproprietary Articles: Neocinchophen.

Calco Chemical Company: Neocinchophen-Calco.

Hollister-Wilson Laboratory: Pituitary Solution-Hollister-Wilson; Ampules Pituitary Solution-Hollister-Wilson.

Pure Gluten Food Co.: Hoyt's Gluten Special Flour.

Van Dyk and Company: Benzyl Benzoate for Therapeutic Use-Van Dyk and Company.

Winthrop Chemical Company: Luminal; Luminal Sodium; Luminal Tablets.

Calco Chemical Company: Procaine-Calco.

Merck and Company: Ichthyol-Merck.

E. R. Squibb and Sons: Thyroxin-Squibb; Typhoid Parathyphoid Bacterin (Special Bacterial Vaccine No. 13)-Squibb.

Winthrop Chemical Company, Inc.: Sajodin.

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ARRANGEMENTS have been made for the state board of health to use the franking privilege for mailing samples of blood for Wassermann tests and slides for gonococcus examinations by

the physicians of the state to the laboratory at Columbia, Missouri. Physicians in the larger cities, however, will not have the privilege of this laboratory because of the fact that they have municipal laboratories. The monthly report of the venereal division for November shows an average daily attendance at the clinics of 123; number of cases of gonorrhea treated, 221; number of syphilis treated, 163; number of gonorrhea reported by physicians, 294; number of syphilis, 187; number of chancroid, 45; other venereal diseases, 17. Number of doses of arsphenamin administered in the clinics, 247. There were 27,964 educational pamphlets distributed during the month. The activities of the venereal division are increasing very rapidly. The director, Dr. R. L. Russell, is now engaged in a "Keeping Fit" campaign, attempting to reach, with an exhibit and lecture, the 166,000 boys between the ages of 15 and 20.

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THE United States Civil Service Commission has announced examinations for field supervisor of reconstruction aides in occupational therapy at \$1,800 a year; superintendent of aides in occupational therapy at \$2,400 a year; special instructor in occupational therapy at salaries ranging from \$1,200 to \$3,500 a year, and reconstruction aides at salaries from \$720 to \$960 a year. Reconstruction aides will also receive quarters, subsistence and laundry. The examinations for field supervisor of reconstruction aides and superintendent of aides will be held on February 24. The other examinations will be open until further notice. Both men and women, if qualified, will be admitted, but appointing officers have the legal right to specify the sex desired when requesting certification of eligibles. None of the examinations requires competitors to assemble in an examination room for tests. The ratings will be based upon the elements of education, training and experience and upon a written discussion on one of a number of given topics connected with the work. Further information and application blanks may be obtained from the postoffice or custom house or by communicating with the United States Civil Service Commission, Washington, D. C.

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JACKSON County Medical Society is negotiating for the erection of an office building for the use of its members to be located at 11th and McGee Streets, Kansas City, near the heart of the business section. The society owns valuable property in a prosperous district but too far removed from the center of business to make it



available as a site for an office building. It is planned to erect a 14-story building to contain from 300 to 500 offices, a garage in the basement, rooms on the first floor for an apothecary, a physician's supply depot, etc.; to have a meeting place for the Jackson County Medical Society with a seating capacity of 500; a separate group of rooms for a medical library, small club or committee rooms, a cafe for the exclusive use of members and their friends; the space devoted to the society, to the library, to the club and committee rooms and to the cafe to be rent-free; the building to be erected without any financial obligations on the part of the society itself, but with the stipulated right of the society to control the policy of the building as long as it continues to be the society home and meeting place; members to sign leases for space and to own bonds or stock in the building company if they so wish, with the hope that the control of the building will be kept in the hands of the medical profession.

DR. SIMON FLEXNER, who is in charge of the Medical Research Bureau of the Rockefeller Institute, was the guest of the St. Louis Medical Society at a reception and dinner given at the University Club, Jan. 2, 1920, when he delivered an informal talk on the improved outlook of medical education and medical science, which was very greatly enjoyed by the ninety-five members who were present. Dr. Flexner was genially optimistic for medical education. He declared that it was now becoming relatively easy to secure funds for this purpose whereas not long since the person who would give large sums to further improvements in this field was indeed a *rara avis*. He mentioned the recent contribution from Mr. Rockefeller of \$20,000,000 and the separate sum of \$5,000,000 for the Vanderbilt University as portentous of quite large sums from other sources in the near future. He did not pretend to know whence this money would be derived but took the broad viewpoint that an aroused people had visioned the large benefits flowing from a class of highly educated physicians which would stimulate donations of immense sums for the purpose. He also lauded the profession of teaching medicine, saying it was a man's size job that demanded training and preparation which should be met with such recognition as would enable capable persons to enter the profession and maintain their position in a satisfactory manner. Dr. W. W. Graves, chairman of the entertainment committee of the society, was toastmaster at the banquet.

THE U. S. Public Health Service has begun an investigation of conditions surrounding child life in Missouri and several experts are in the field working under the auspices of the state board of health. The fiftieth general assembly broadened the powers of the board by passing a bill which empowers it to establish a bureau of child hygiene but the legislature overlooked the important point of providing funds for the operation of the bureau, therefore the board of health was powerless to begin the investigation that means so much to the welfare of the people. The federal public health service stepped into the breach and arranged to spend \$50,000 in child welfare work in this state where it is so much needed. It is hoped that the results of the investigation will prove so encouraging for the possibilities of conserving child life that the next legislature will appropriate a sufficient sum of money to enable the board of health to conduct the work. It is also expected that the state will, as a result of the efforts now being put forth, improve our birth statistics so that Missouri will be admitted to the registration area by the Census Bureau, a distinction we are now denied because our birth statistics are not sufficiently accurate to make them reliable for statistical purposes. The work is under the direction of Dr. C. F. Knight of the U. S. Public Health Service, who has among his assistants, Dr. Lydia Allen DeVilbiss, an expert in child hygiene whose excellent work in this field has given her national prominence. During the last meeting of the legislature when the children's code bills were up for passage, Dr. DeVilbiss spent considerable time at the capitol assisting the Children's Code Commission in explaining to the legislators the purport of the bills.

MEMBERSHIP CHANGES, JANUARY

NEW MEMBERS

- Collins, Thomas J., Caruthersville.
- Dorris, Richard P., Central Trust Bldg., Jefferson City.
- Haseltine, Sherwin L., 977 Benton Ave., Springfield.
- Helton, James W., Chillicothe.
- Hubbard, James M., Mountain Grove.
- Knabb, Henry F., 500 E. Commercial St., Springfield.
- Manting, George, 5604 Delmar Ave., St. Louis.
- Morris, C. L., Woodruff Bldg., Springfield.
- Postelthwaite, F. M., 408 Chambers Bldg., Kansas City.
- Prather, Roy William, Excelsior Springs.

Ross, Hermann C., 1527 E. Grand Ave., St. Louis.

Schoenfeld, Otto E., Lathrop.

Trippe, Harrison Chamberlain, Breckenridge.

Walter, David J., 1201 N. Taylor Ave., St. Louis.

#### CHANGES OF ADDRESSES

Beckemeyer, Wm. A., 120 W. Fifth St., Sedalia, to 410 S. Ohio.

Boteler, G. M., 205 Physicians and Surgeons' Bldg., St. Joseph, to 406 Bartlett Trust Bldg.

Brooks, Barney, 5637 Pershing Ave., St. Louis, to 422 Univ. Club Bldg.

Bundy, Harry E., 681 Cass St., Milwaukee, Wis., to 2644 N. Spaulding Ave., Chicago, Ill.

Byrns, R. E., Jefferson Barracks, to 3824 N. Eleventh St., St. Louis.

Chapman, D. A., Joplin, to Republic, Pa.

Cohen, Frank, Base Hospital, Ft. Riley, Kansas, to 2905 Troost Ave., Kansas City.

Cooper, J. O., Linn, to Jefferson City.

Creveling, H. Clay, 326 Metropolitan Bldg., St. Louis, to 323 Frisco Bldg.

Crider, A. J., Brinktown, to Dixon.

Cuppaidge, G. O., Brunswick, to Moberly.

Elder, J. T., Lamonte, to Houstonia.

Elders, Lt. Frank A., Base Hospital No. 83, Camp Pike, Little Rock, to Hayti, Mo.

Elkins, Wm. H., Sedalia, to Santa Fe Hospital, Topeka, Kans.

Esselbruegge, Frederick C., Brown Hotel, Des Moines, Iowa, to 1107 North Park Place, St. Louis.

Farmer, L. R., Lees Summit, to 622 Southwest Blvd., Kansas City.

Gilliland, O. S., 124 Maple, Tacoma Park, Washington, D. C., to 4722 Charlotte St., Kansas City.

Grove, G. W., M. K. & T. Hospital, Sedalia, to Knobnoster.

Hagler, Fred, Wall Bldg., St. Louis, to 305 Lister Bldg.

Havard, H. D., M. K. & T. Hospital, Sedalia, to Pollock Bldg., Mobile, Ala.

Haynes, Frank W., 401 Lister Bldg., St. Louis, to Eleventh and Kansas Ave., c/o Beverly Apartment, Topeka, Kans.

Heilner, E. A., 208 E. Thirteenth St., Sedalia, to Green Ridge.

Hiller, F. B., Thirty-first and Troost Ave., Kansas City, to 401 Westover Bldg.

Holbrook, W. F., Argyle Bldg., Kansas City, to 810 Lathrop Bldg.

Horigan, J. A., Fifty-Third and Troost Ave., Kansas City, to 1107 E. Fifty-Third St.

Hurwitt, Frank, 201 Argyle Bldg., Kansas City, to 1125 Grand Ave.

James, Frank, Sheldon, to Wichita, Kans.

Kaemmerling, Gerhard, 1006 W. Forty-Second St., Los Angeles, Calif., to 21 Rudy Bldg., Glendale, Calif.

Kopf, A. J., 622 Southwest Blvd., Kansas City, to Woodland, Calif.

Krall, P. M., University Hospital, Kansas City, to Snyderhof Hotel.

Kuhn, Henry J., 4062 Lindell Blvd., St. Louis, to 2920 State St., Milwaukee, Wis.

Krueger, Owen, 711 Lathrop Bldg., Kansas City, to American Red Cross Hospital, Warsaw, Poland.

Lilly, T. E., 610 Lathrop Bldg., Kansas City, to 405 Argyle Bldg.

McCarty, E. D., Mo. Pac. Hospital, St. Louis, to Poplar Bluff.

McKittrick, Ora F., Salisbury, to Colliers, West Virginia.

McNearney, Joseph, Jefferson City, to Florissant.

Mackey, Dudley E., % Moering X-Ray Lab., Newark, N. J., to 44-46 Walnut St.

Matlock, Wallace L., Caruth, to Kennett, R. F. No. 1, Caruth.

Murphy, John C., 4916 McPherson Ave., St. Louis, to Suite 1804, 220 Broadway, New York, N. Y.

Nieweg, G. A., Houstonia, to Lamonte.

O'Malley, W. F., 6209 Etzel Ave., St. Louis, to Webster Groves.

Porter, A. L., 3601 Central St., Kansas City, to 226 Lathrop Bldg.

Pickett, C. P., Mercer, to 314 Ash St., Jefferson City.

Rogers, F. B., St. Lukes' Hospital, Kansas City, to 638 Lathrop Bldg.

Schorer, Edwin H., 1010 Rialto Bldg., Kansas City, to 3704 Charlotte.

Schwald, N. A., Cole Camp, to Killeen, Tex.

Snider, S. H., University Hospital, Kansas City, to 800 Rialto Bldg.

Sutter, Jno. H., 6437 Olive St. Rd., St. Louis, to 6531 Bartmer Ave., University City.

Tainter, F. J., St. Charles, to Jefferson Barracks.

Wagenbach, W. F., Sewall's Point, Norfolk, Va., to U. S. P. H. S. Hospital, 5800 Arsenal St., St. Louis.

Weaver, J. S., 316 Grand Avenue Temple, Kansas City, to 1311 Rialto Bldg.

Williams, James R., Siloam Springs, Ark., to 829 Rialto Bldg., Kansas City.

Witter, William L. M., 547 W. Jackson Blvd., Chicago, to LaGrange, Ill.

Woolley, P. V., 4146 Charlotte St., Kansas City, to 1125 Rialto Bldg.



TRANSFERRED

Dewey, Corydon O., Lark, Utah, from Caldwell County Medical Society to Lark (Utah) Medical Society.

DROPPED

Ezickson, William J., Surgeon General's Office, Washington, D. C.  
Davis, William L., Polo.  
Fitzpatrick, C. M., Lesterville.  
Johnson, Samuel R., St. Charles.  
Lamb, J. H., Buffalo, Ala.  
Martin, J. H., Redmonville.  
Shopshire, James W., Colorado.  
Woolsey, Calvin L., Chillicothe.

RESIGNED

Kelly, P. D., Nemaha, Neb.

DECEASED

Ellis, John I., Oak Ridge.  
Gray, Loren L., Unionville.  
Harris, Joseph E., Marshall.  
Kuhn, Daniel, St. Louis.  
Montgomery, Robert E., Excelsior Springs.  
Peak, Oscar L., Topeka, Kan.  
Tiedemann, Ernst F., St. Louis.  
Tipton, Quincy A., Blythesville, Ark.

## OBITUARY

### GURLEY C. McCoy, M.D.

Dr. G. C. McCoy of St. Louis, a graduate of the Washington University Medical School, 1908, died Nov. 10, 1919, from nephritis, aged 35. Dr. McCoy was one of the most promising young physicians of St. Louis, thoroughly imbued with the spirit of highest professional ideals and was very active in medical practice notwithstanding the handicap of an illness that extended over a period of years. He was among the first to offer his services in the medical department of the army but was rejected on account of his ill health.

### OSCAR L. PEAK, M.D.

Dr. O. L. Peak, formerly of Springfield, Mo., but for the last three years a resident of Topeka, Kan., died in the latter city Nov. 26, 1919, from apoplexy, aged 70 years. Dr. Peak graduated from the Cincinnati College of Medicine in 1878, and began practice in Pratt, Kan., where he became one of the leading surgeons of that community. In 1893 he moved to Springfield, Mo., practicing in that community continuously

until 1916, when he accepted the position of national medical director of the Knights and Ladies of Security with headquarters at Topeka, Kan. At his special request he retained his membership in the Greene County Medical Society of which he had been an active member for many years.

### JAMES T. DOUGLAS, M.D.

Dr. J. T. Douglas of Ferguson, a graduate of the St. Louis Medical College (now the Washington University School of Medicine), 1859, died in a hospital at St. Louis, Nov. 29, 1919, aged 85 years. He was a member of the sixteenth class of the old St. Louis Medical College affectionately called "Pope's" by admirers of that renowned physician, and for sixty years practiced medicine in St. Louis County. Such an extended period of activity in the honorable practice of medicine falls to the lot of only a few but it was exceeded by at least one Missouri physician, the late Dr. J. M. Scott of St. Louis, whose span of life reached 89½ years and his professional life sixty-five years. Dr. Scott was also a graduate of "Pope's," receiving his diploma in 1853, the tenth class graduated from that school.

Dr. Douglas was a cultured gentleman and a skilful physician, respected and honored in an unusually wide territory, his long years of practice having extended his work into every section of the community where he lived. He was a member of the St. Louis County Medical Society and promoted the honorable practice and scientific development of medicine in every direction while unfailingly retaining his active membership in the society up to the time of his death.

### ROBERT E. MONTGOMERY, M.D.

Dr. R. E. Montgomery died at his home in Excelsior Springs, Sept. 22, 1919, age 56 years. He was born at Ghent, Ky., coming to Missouri in his childhood, and received his preliminary education in the Lawson public schools, which are rated among the best rural schools in the state. His medical studies included courses in the Hospital Medical College of Louisville, Ky., and the St. Louis Medical College, from which he graduated in 1883. He practiced general medicine in Ray County five years, devoting his spare time to the study of chemistry and bacteriology. He moved to Excelsior Springs and established the Montrose Chemical Laboratory, which he operated until a short time before his death.

Dr. Montgomery held the appointment from the Department of the Interior of government inspector and bacteriologist at Excelsior Springs for five years.

His last venture was the establishment of a mineral water magazine, the *Aqualore*, devoted to the study and therapy of natural mineral waters in general and of those of Excelsior Springs in particular. It is regretted that his career in this direction was so suddenly checked by the Grim Reaper.

He had a host of friends, was a member of the Missouri State and Clay County Medical Societies, and was loved wherever known.

J. J. GAINES, M.D.

### JOSEPH E. HARRIS, M.D.

Dr. J. E. Harris of Marshall, a graduate of the medical department of Missouri University, 1881, and of the University of Maryland School of Medicine, 1883, died at his home after a lingering illness, aged 59 years. Dr. Harris was that rare type of man whom to know is to love. Universally honored and respected by his fellow physicians for his skill and learning in medicine he was admired and loved not only by all doctors who knew him but every person who was brought in contact with him responded to the uplifting influence of his gentle spirit, his kindly thoughts for their welfare, and his unrelenting efforts to ameliorate the suffering and troubles both mental and physical of his fellowman. The spirit of helpfulness that characterizes the true physician had its highest development in Dr. Harris which combined with an instinctive power of discerning the right from the wrong and firmly adhering to the right on all questions, made him a type of physician and citizen that the profession of the community in which he lived could trust, honor and revere to the utmost. Dr. Harris began practicing medicine in the little town of McCredie in Callaway County, moving to Marshall in 1890, where he soon became one of the most active and energetic physicians of Saline County. A few years ago a heart affection placed a limit on his physical endurance but he continued his practice and for the past year or two had been a member of the staff of the Colony for the Feeble-minded at Marshall. It was in this institution that he was stricken with paralysis in June, 1919, from which he partially recovered but another attack toward the end of the year proved rapidly fatal. Dr. Harris was a member of the Saline County Medical Society to which he was ever faithful and diligently sought to promote every movement for the improvement of the profession.

## MISCELLANY

### HONORABLY DISCHARGED, MEDICAL CORPS, U. S. ARMY AND NAVY

Altheide, C. H., St. Louis.  
Cohen, Frank, Kansas City.  
Esselbruegge, F. C., St. Louis.  
Hagler, Fred, St. Louis.  
Stewart, E. L., Kansas City.  
Underwood, M. L., St. Joseph.  
Wachenfeld, C. H., St. Louis.  
Walker, J. C., Kansas City (Navy).

### THE KANSAS CITY GENERAL HOSPITAL

The Jackson County Medical Society, in its position as sponsor for the local organized medical profession, and its work and support in the interest of public health, is especially concerned in the institutions served by its members. Quite naturally it has been interested in the character of service rendered the public at the City Hospital, especially since the specific care of the patients in its wards is dependent on a staff made up of the members of this society.

Considerable discussion of late has been given both in the medical and lay press to hospital standardization. Locally this society has been urging better management and a service of higher grade for the indigent sick and injured. In addition the American College of Surgeons has been demanding that its membership, composed of the leading surgeons of the country, do their part toward raising the standard of the general and private hospitals in their respective cities.

In line with the above, and we hope significant of real change and progress at the City Hospital, a new appointment has been made to the membership of the board of health. It is stated, also, that the superintendent is giving his earnest support to the staff in their work.

A recent visit to the hospital reveals the following:

The present medical and surgical staff, composed of members of the County Society, who have been on duty three weeks, have established a remarkable state of harmony and understanding in the three departments of service, namely, the staff, interns and nurses, and have introduced a new system of histories and records with competent laboratory assistance, approved by the American College of Surgeons, which if maintained, will raise the General Hospital from Class C, where it has been for years, to Class A. This has been accomplished by the regular staff, concurring with the requirements of the American College of Surgeons, and by the loyal support of a well trained but formerly discouraged group of interns, and a faithful, competent corps of nurses.

To one going over the records of the past three weeks as instituted and carried out, talking with the staff members, who have been working from two to six hours daily on the new system, and to hear and see the new interest and expressed loyalty of the interns and nurses, it is very evident that a start has been made toward a radical change that the public may approve, and that should result in a very short time in a more humane, scientific and thoroughly efficient hospital service.

In connection with this new régime started with the right purpose and the good faith of the staff, it has been announced by the new president of the board of health that there are to be regular conferences in the future of the staff and board members. We are also informed that a new superintendent of nurses, a graduate of Johns Hopkins, has been appointed.



The Jackson County Medical Society passes its approval on the specific acts and changes of the past month looking toward improvement and standardization at the City Hospital. Its active support will be given toward every recommendation and act of the mayor, the board of health and the staff, indicating economic and scientific management and service in the care of Kansas City's ill and injured.

The recent discussion on health matters in our city is bearing fruit.—*Weekly Bull. Jackson County Med. Socy.*

### CITY HOSPITAL FOR COLORED PEOPLE

With the opening of a city hospital for negroes in St. Louis the municipality will be far better equipped to care for the sick poor than formerly, when both white people and colored people were housed in the same building. The new hospital is known as City Hospital No. 2. A regular visiting staff has been appointed on the recommendation of the faculty of the Washington University Medical School and under the law the regular visiting staff will have entire charge of the patients and be solely responsible for their care. In addition to the regular visiting staff there is to be an associate visiting staff composed of colored physicians who will have opportunity to examine or observe the patients under the direction of the regular visiting staff. The resident staff will also be composed of colored physicians. The membership of the regular visiting staff as composed at present follow:

#### MEDICINE

George Dock, consulting physician; Drew W. Luten, chief of staff. Associate physicians: Albert E. Tausig, Jerome E. Cook, Walter Fischel, Oliver H. Campbell, Llewellyn Sale and Lionel S. Luten.

#### SURGERY

Evarts A. Graham, consulting surgeon; Warren R. Rainey, chief of staff. Associate surgeons: Walter C. G. Kirchner, Charles E. Hyndman, Ellis Fischel and Leon C. McAmis.

#### OBSTETRICS AND GYNECOLOGY

Henry Schwarz, consulting surgeon; George Gellhorn, chief of staff. Associate surgeons: Fred J. Taussig, William Kerwin and Raymond M. Spivy.

#### PEDIATRICS

W. McK. Marriott, consulting physician; T. C. Hempelmann, chief of staff. Associate physician, Adrien S. Bleyer.

#### NEUROLOGY

Sidney I. Schwab, consulting physician. Associate physicians: Michael Kasak and Leland B. Alford.

#### DERMATOLOGY

Martin F. Engman, chief of staff. Associate physician, Richard S. Weiss.

#### OPHTHALMOLOGY

Meyer Weiner, chief of staff; William F. Hardy, acting chief of staff. Associate surgeons: Hayward Post, Max William Jacobs and Frederick O. Schwartz.

#### LARYNGOLOGY AND OTOTOLOGY

William E. Sauer, chief of staff. Associate surgeons: Walter L. Johnson, Stanley S. Burns and George E. Hourn.

#### ORTHOPEDIC

Archer O'Reilly, chief of staff. Associate surgeons: Charles A. Stone and J. Edgar Stewart.

#### GENITO-URINARY

William M. Robertson, chief of staff. Associate surgeon, H. McClure Young.

#### STOMATOLOGY

John H. Kennerly, dentist.

The house staff is composed of the following colored physicians:

Drs. J. T. Anderson, resident surgeon; Charles R. Humbert, resident physician. Senior interns: S. H. C. Owen and Kelly D. Robinson. Junior interns: Earl Livingston, T. W. Nelson, Lonie Routen, Elliott Hardeman, Blyden Yates, Andrew Wallace and John A. Williams.

All the colored patients from the City Hospital were moved into City Hospital No. 2 on November 26. The hospital has a capacity of 200 patients and now averages about 145 patients. The institution is well equipped although there is some equipment yet to be installed.

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1920

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Benton County Medical Society, Sept. 13, 1919.

Webster County Medical Society, Dec. 1, 1919.

Madison County Medical Society, Dec. 2, 1919.

Livingston County Medical Society, Dec. 31, 1919.

Schuyler County Medical Society, Jan. 9, 1920.

### ST. LOUIS MEDICAL SOCIETY

#### Meeting of December 16, 1919

The scientific program was contributed by guests of the Society, each choosing his own subject as follows:

"Influenza and Influenza Pneumonia," by Dr. Victor C. Vaughan, Dean of the University of Michigan.

"The Lacey-Haist Method of Testing the Immunity in the Whole Blood," by Dr. S. Solis Cohen, Professor of Therapy and Medicine at Jefferson Medical College, Philadelphia.

"The Treatment of a Mild Case of Diabetes Mellitus," by Dr. Rollin T. Woodyatt, Professor of Medicine at Rush Medical College, Chicago.

"The Conditions Found in Certain Parts of Europe as a Member of the Hoover Relief Committee," by Dr. Arthur J. Carlson, Professor of Physiology University of Chicago.

"Incidents of Typhoid Fever in the A. E. F.," by Dr. Haven Emerson, Professor of Hygiene at Cornell University, New York.

"The Study of Botulism," by Dr. Carl L. Alsberg, Chief of the Bureau of Chemistry, Department of Agriculture, Washington, D. C.

"The Differential Diagnosis of Chloral and Morphine Poison," by Dr. Hugh McGuigan, Professor of Physiology and Pharmacy, University of Illinois.

"The American Relief Committee's Work," by Dr. Curtis G. Gephart, of the Department of Physiology, Cornell University, New York.

Attendance 288.

#### Meeting of the Council, November 12, 1919

The meeting was called to order at 8:45 p. m. by the president, Dr. Wm. Engelbach.

A letter from Dr. Louis Behrens in regard to inviting the American Medical Association to hold its meeting in 1922 in St. Louis was read.

Dr. Hamel moved that this letter be received and filed.

A letter from Dr. J. J. Reilly in regard to paying dues while in service was read.

Dr. Funkhouser moved that the secretary be instructed to refund the 1918 dues of Dr. Reilly. Seconded and carried.

Dr. Funkhouser moved that the president appoint a committee to decide when dues should be remitted for members who were in service according to date of admission into service, the action of the committee to be reported to the Council.

The following were appointed on the committee: Drs. Funkhouser, Bliss and Hamel.

Applications for active membership by transfer were read for the second time and all were elected: Drs. Max Meyer from the Boone County (Missouri) Medical Society; Noxon Tooney from the Baltimore (Maryland) Medical Society; Eugene R. Van Meter from the Macoupin County (Illinois) Medical Society.

An application from Dr. J. R. Hamlin for active membership by transfer from the Lewis County (Missouri) Medical Society was read for the first time. This was referred to the Membership Committee.

The Membership Committee also recommended Dr. Walter McN. Miller of Columbia, Missouri, for corresponding membership and Dr. Miller was elected.

The application for membership by transfer from Dr. Wm. Maurice Smit was read for the first time.

The secretary read a letter from the secretary of the American Medical Association requesting data relative to old age and physical disability of physicians in St. Louis.

Dr. Hamel moved that the secretary be instructed to confer with Dr. Joseph Grindon as a committee to ascertain the number of old and disabled physicians in the city. Seconded and carried.

Dr. Engelbach reported for the St. Louis Clinics Section and stated that this section would like to furnish programs once a month for the General Society during the year of 1920.

Dr. Hamel moved that the work of the St. Louis Clinics Section be approved by the Council and that they be allowed to furnish programs as stated above. Seconded and carried.

Dr. Graves moved that the secretary be authorized to write to the Kinloch and Bell Telephone Companies about complaints of telephone service from physicians with a request that the poor service now existing be improved. Seconded and carried.

Councilors present: Drs. Bliss, Boisliniere, Funkhouser, Gayler, Graves, Hamel, Rehfeldt, Engelbach, Koetter and Gundlach.

Councilors absent: Drs. Caulk, Falk, Reder, Smith and Tupper.

#### Meeting of the General Society, December 2, 1919

The meeting was called to order at 8:35 p. m. by the president, Dr. Wm. Engelbach.

Dr. Neil S. Moore presented an interesting case of periurethral infiltration.

The scientific program consisted of the following: "Some Principles in the Recognition of Syphilis and the Syphilitic," by Dr. Wm. W. Graves.

"The Initial Lesion and Its Differentiations from Other Lesions," by Dr. Joseph Grindon.

"Early and Late Nervous System Reactions," by Dr. Frank R. Fry.

"Bone and Joint Reactions," by Dr. A. E. Horwitz.

"Reactions of Ear, Nose and Throat," by Dr. Wm. E. Sauer.

"Reactions of Ocular Apparatus," by Dr. Wm. F. Hardy.

Discussion by Drs. Borden S. Veeder, John Green, Jr., L. K. Guggenheim, F. R. Fry, Joseph Grindon and Wm. W. Graves.

Dr. A. Pohlman, a member of the local committee of the American Association for Advancement of

Science, spoke of the coming meeting and suggested that the president, Dr. Simon Flexner be honored in some way during his stay in St. Louis.

Dr. Norville W. Sharpe suggested that an invitation to address the Society be extended to Dr. Flexner.

Dr. Boisliniere moved that the matter be referred to the Council with a suggestion that a reception be tendered Dr. Flexner. Seconded and carried.

Attendance 173.

Arthur Gundlach, M.D., Asst. Secy.

#### PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

##### Sixty-Second Meeting, Monday, Nov. 10, 1919

#### 1. EXHIBITION OF CASES. A. A CASE OF PSEUDOHYPERTROPHIC DYSTROPHY.—By DR. CARL O. KOHLBRY.

Patient, L. G., aged 8 years, complains of "stumbles when walks; has trouble getting up when lying down."

*Family History.*—Grandfather had large calves of legs but no weakness. One younger brother, aged one year, has large calves, just starting to walk. This brother was seen and has definitely enlarged calves though not nearly so marked as those of the patient's.

*Previous History.*—Late in talking, started at 2 years. Walked at 1 year but stumbled.

*Present Illness.*—Started at time when patient first began to walk at 1 year. Often fell on walking, stumbled often. On lying on back, can't get up fast, rolls over on abdomen and uses arms to get up. Can't squat down without losing balance. Can't climb stairs well. Strength of arms poor, can't carry two loaves of bread any distance. Has had large calves to legs since start of walking. Mentality considered normal.

*Physical Examination.*—Mentality average. Rather dull expression due probably to very large tonsils and adenoids. Thighs not particularly atrophied, calves of legs very large. Infraspinatus muscles large. Upper arm extensors probably slightly large. Posture erect, practically no tendency to lordosis. Walks fairly well, though tendency at times to walk on toes and turn toes in, high instep, probably due to some atrophy of peronei. When laid on back, rolls over on abdomen, draws legs up under him, then arms, straightens legs, then puts one arm and later the other on the knees and straightens out. The whole takes an appreciable interval of time. When hands are put in axillae and patient raised the shoulder muscles are weak and the girdle gives and tends to cause him to slip through the hands. Pectoral muscles are small, atrophied. Arms definitely weak, grips are weak. Muscles of calves feel firm and really look very strong. Blood sugar 0.13 per cent. (normal). Blood and urine normal.

#### DISCUSSION

DR. MARRIOTT: This child is not very far advanced, but there have been a number of interesting things in this case. Low blood sugar has been described in cases of this type. This particular boy has a normal blood sugar. The condition has been linked up with the various endocrine glands. The last one of these suspected has been the pituitary and a number of cases have been treated with the anterior lobe of the pituitary. The condition is not nervous but entirely muscular.

DR. GRAVES: I would like to ask if any of the grandparents or uncles of this case were affected this way. The reason I ask is that I recently saw a case where as far back as can be traced, there was no history of any previous relation who had it or had developed it in his family.



DR. MARRIOTT: There was a grandfather who was said to have had enlarged calves of his legs. Another child is definitely developing the same thing. The girls in the family show no signs of it.

**B. A CASE OF DISPLACEMENT OF THE LIVER FOLLOWING TRAUMA.**—By JOHN P. COFFEY, M.D.

Patient, Mrs. S., aged 35 years; American; housewife. Chief complaint swelling of abdomen, pain, dragging and heaviness in hepatic region.

*Personal History.*—Not important, except at the age of 9 years patient engaged in "skipping rope contest"; after jumping the rope some 400 or 500 times she collapsed. Remained unconscious for about two weeks. Says she became "very black" during this period. In the succeeding six months patient says she was unconscious most of the time and very much cyanosed during the attacks. For fourteen months following the collapse she was unable to walk, because of stiffness in her muscles and joints. At no time were any of the present symptoms complained of. She thinks she completely recovered and has been well until the present time.

*Marital History.*—Married for sixteen years; pregnant five times. First pregnancy aborted at eight months. Eight months later she had second abortion; remaining three births normal delivery in all respects. She has three living sons.

*Menstrual History.*—Normal; husband has always been well. Both husband and wife deny gonorrhea and lues.

*Present Illness.*—Patient in good health from 11 years of age until onset of present trouble three months ago. At this time she fell from a ladder from a height of about 15 feet, the ladder falling on her. Patient struck on right side, bruising arm and leg but no immediate injury of abdomen. Partially stunned by the fall, but able to walk home a distance of 150 yards. Arriving home she had dull dragging ache in right side, and sensation of a lump slipping up and down in right abdomen. Symptoms disappeared on sitting down and no mass was visible at this time. A doctor diagnosed fractured ribs. An elastic binder gave no relief. Two days after application of binder patient noticed increase in size of abdomen and dragging sensation became more severe as abdomen enlarged. Patient thinks this mass was as big two weeks after entering as at present time. There were no symptoms referable to intestinal tract, as vomiting, dyspepsia, and her eating is not affected. No symptoms simulating biliary colic, as jaundice and pain. There has been no coughing or shortness of breath. No ascites or edema of legs. The dragging and heaviness is no worse at present time than when swelling was first noted.

*Notable Physical Findings.*—Hyposthenic habitus; panniculus everywhere moderate, but patient is not cachectic. Head is negative, except for oral sepsis. Sclerae not discolored. Heart findings are normal; respiratory movements on two sides are equal; no dyspnea. Litten's sign on the left is very short and superficial. No Litten on the right. Lungs negative. Upper liver border is underneath the seventh rib. On standing the abdomen protrudes like a small full term pregnancy; when lying the abdomen is visibly greatly enlarged, greater on the right than on the left. On palpation an enormously enlarged liver is felt filling the entire right abdomen and extending to the iliac crest filling considerable of the inner upper left quadrant. There is a deep notch in the border of tumor at umbilicus. Fundus of gallbladder not made out. Liver mass is only slightly movable; does not fall back into the abdomen when patient lies down, cannot be displaced upward manually and at notch moves about 1 cm. with deep respiration. No movement on normal breathing. Edges are sharper and thicker than normal liver edge. Surface is round

and smooth except for slight lobulations felt beneath ensiform; these are continuous with the mass below. Spleen border is felt three finger breadths below costal margin, vertical diameter 16 cm. There are no tender points in abdomen, no evidence of fluid. Superficial veins are not dilated. Umbilicus is depressed; no hemorrhoids; extremities negative.

*Laboratory Findings.*—Urine is negative; blood shows slight secondary anemia; stools and sputum negative. Blood Wassermann in both cholesterinized and noncholesterinized antigens. Fluoroscopic examination shows right diaphragm depressed about 5 cm. On right, abdominal viscera are much displaced by mass in right side. EKG normal curve.

Since patient entered she has experienced no symptoms while lying quietly in bed or when sitting. When she attempts to walk or do lifting the dragging in the hepatic region returns. Blood Wassermann taken on other four members of the family showed husband's blood negative but the three children gave in both antigens.

This case is presented as one of displaced liver and anteversion following trauma, with a secondary congestion.

Positive Wassermann with a history of two abortions followed by three normal births and the presence of indefinite nodules in the mass, suggests a possible leucic etiology. The patient at present is undergoing intensive and antileptic treatment.

#### DISCUSSION

DR. DOCK: This represents a comparatively rare series of cases, as the liver is one of the abdominal organs infrequently found displaced. It often extends out from its normal position, but to find the whole organ considerably out of its place or out of its axis is rare. Probably the cases reported are not an indication of the number found, but a marked case like this certainly must be rare, and if any one present this evening knows of such cases he should speak about them. We may ask why the liver does not oftener get displaced. The reasons are complex. The liver is closely attached to the liver veins and inferior cava; the suspensory and coronary ligaments and the peritoneal folds are comparatively firm; the liver is kept up by the general abdominal pressure and by the air tight connection with the diaphragm which in turn is supported by the lung above it.

In testing the relation of the different supports by experiment, very interesting results have been found. If one takes a body and opens the abdomen the liver does not always fall down. Sometimes it does not sink at all. If the suspensory ligaments are cut, it sometimes falls down; sometimes into the bottom of the pelvis. Variations in the amount of descent depend on the strength of the ligaments. In this case, as in all cases of wandering liver, many interesting experimental and anatomical points are brought up.

There are two interesting things in the history, a possibility of two traumatisms. Whether the rope-skipping loosened the liver attachments is one point. Many cases of displaced liver have occurred in people after a severe shaking up, after severe sneezing, as in people with hay fever, etc. Then comes the traumatism from falling from the step-ladder. The symptoms began after that, but we cannot deny a partial displacement before that. The whole question is extremely important in many ways, and I would be very glad if anyone who has any information on this subject would present it.

DR. TERRY: I want to say just a word or two. Dr. Dock has given such a complete statement of the mechanism of liver support that there is nothing left to say, except to emphasize the point further by a case of displaced liver which was observed in a dissecting room cadaver. In this instance the dislocation was upward. The right lung had been nearly destroyed by tuberculosis and there remained only a small part of the apex. The liver occupied almost

the entire space of the right thoracic cavity, the diaphragm intervening between it and the remains of the lung. The liver reached the level of the third rib. The abdominal muscles were apparently shortened; the normal hepatic region was occupied by the small intestine. The case presented this evening is interesting, especially on account of the slight functional disturbance associated with such great anatomical changes. One would expect that phrenic nerve symptoms would be present; that the heart beat would be affected through the dragging on the right atrium.

## 2. PAPERS.

### 3. FIFTEEN MONTHS AT THE MILITARY HEART HOSPITAL AT COLCHESTER, ENGLAND.—By DR. FRANK N. WILSON.

The magnitude of the problem of illness attributed to cardiovascular disease in the British army is well shown by the figures published by Galsworthy in *Reveille* of August, 1918. Of 358,160 soldiers discharged from the army and pensioned up to June of that year, 36,569, or a little over 10 per cent., were sufferers from so-called heart affections. To meet this situation Dr. Thomas Lewis was chosen early in the war by the Medical Research Committee to make a study of the problem and to develop methods of handling men invalidated from active service with cardiovascular diagnoses. The signal success of this work resulted, in the summer of 1917, in the establishment of a special hospital at Colchester. This hospital had a capacity of about 500 men per month. Owing to the shortage of medical officers in England, an arrangement was made by which the hospital was partly staffed by Americans.

The patients sent to the hospital were, for the most part, men invalidated from the expeditionary forces with cardiac diagnoses. A routine examination was made as soon as possible after the patient entered the hospital. In taking the history a special inquiry was made into the patient's exercise tolerance from childhood until the onset of his illness. Past illnesses were noted and direct questions were asked with regard to rheumatic fever, chorea, frequent tonsillitis, influenza, trench fever, gas poisoning, and shell shock. The character of the patient's active service was ascertained and the date of onset of his illness, the circumstances under which it arose, and its course since that time were recorded.

The physical examination did not differ from that usually performed except that incipient tuberculosis was very carefully looked for and special postures were used to bring out heart murmurs not otherwise audible. A simple exercise test was made at this time. The exercise consisted in walking briskly up two flights of stairs (40 steps). The effect of this exercise on the pulse rate and respiration were noted and also any other signs or symptoms which the exercise produced.

Men with definite cardiac enlargement, mitral stenosis, aortic insufficiency, arteriosclerosis or hypertension, congenital heart disease, auricular fibrillation, heart-block, or pulmonary tuberculosis, were immediately discharged from the army. No diagnoses of mitral insufficiency were made and systolic murmurs disregarded unless other signs were present. One of the principal reasons for this attitude was the inability of the average medical officer to distinguish between organic and functional systolic murmurs shown by the large number of men wrongly diagnosed valvular disease of the heart. Furthermore, carefully collected after histories showed that men with systolic murmurs but without other signs did quite as well in the army as men with no murmurs. It was found that the murmur of mitral stenosis was usually louder after exercise and was best heard in the left lateral position, and that the murmur of aortic regurgitation was loudest in the erect or bent-forward position and was best heard when the breath was held in expiration.

This knowledge was of great aid in detecting early cases.

The majority of the patients sent to the hospital were cases of what has come to be called "effort syndrome." The principal symptoms of this group were breathlessness on exertion, precordial pain, giddiness, palpitation, weakness and unusual fatigue ability, fainting attacks, and excessive sweating. Physical examination usually revealed tremor, increased knee-jerks, a tendency to tachycardia, and precordial tenderness. Careful studies of most of the symptoms were made but the pathogenesis of most of them is still in doubt. One rather curious finding was the relatively low consumption of tobacco and alcohol among these men; the explanation seemed to be that they did not tolerate these substances well.

The etiology of "effort syndrome" is rather obscure. About one-half of the men had had symptoms before joining the army. Another large group dated their symptoms from various infectious diseases or from gas poisoning or shell-shock. In still another group the symptoms appeared gradually during active service. It is Lewis' opinion, after about three and a half years of study, that the condition is not an entity but that it is merely a sign of ill-health due to many causes; poor development nervous and physical, unrecognizable early heart disease or tuberculosis, focal infection, delayed convalescence from infections, and exhaustion from the exposure and strenuous life at the front. Cohn has recently put forward the view that the condition is an anxiety neurosis. He found that many of the mild cases cleared up after the armistice was signed. This did not occur at Colchester. It is true that a great many of the patients with "effort syndrome" belong to a group which is ordinarily described as neurotic. This is, however, by no means true of all.

After the preliminary examination the cases of "effort syndrome" were put on graduated exercises for the purpose of determining their exercise tolerance as a guide to their proper classification for military duty, and for the remedial effect which the exercises produced. Five exercises were used: the first two were fifteen and the last three thirty minute drills made up of movements taken from the army manual. They were of gradually increasing severity and were performed out-of-doors when the weather permitted. They were supplemented by route marches in the afternoon. The patients were seen after the drills at definite intervals and whenever they felt that their drill was too severe. All patients were started on the lowest drill and moved up about one step per week until their tolerance was reached. In examining patients after exercise only objective signs were used as criteria for judging the patient's distress. The value of the exercises in determining the grade of duty to which a man should be assigned is obvious. The therapeutic value of the exercises, however, was not striking; conspicuous improvement occurred in a small percentage of the men while in the hospital. One of their most important results was the aid which they gave in convincing the patient that he had no serious heart disease.

In classifying a man for duty the exercise tolerance was the chief guide but other things were also considered. A large series of after histories showed that men who dated their symptoms from rheumatic fever, those who were of advanced age and those who had definite precordial tenderness were unfavorable cases. As a rule these patients showed a low exercise tolerance but when they did not they were placed in relatively low categories.

The after histories completely justified this method of classification and showed that there was a definite trend toward recovery in "effort syndrome." As more time elapsed a higher percentage of men reached the higher grades of duty. Approximately one-fifth of the cases were discharged from the army while at the hospital.



## DISCUSSION

DR. SCHWAB: The term "effort syndrome" was brought over to Base Hospital No. 117 through the work of Dr. Alfred Kohn, who was cardiac consultant of the A. E. F. As a result of several visits to the hospital and various discussions on this subject the term was introduced into the classification of the neuroses at this hospital.

In his recent paper Dr. Kohn suggests that the effort syndrome is a neurosis of the anxiety type, and I rather think that his conclusion is based somewhat at least on the experience with the type of cases which was treated at Base Hospital No. 117. The cases of effort syndrome that we saw were not like the types described in the paper. In no case in which an organic disease of the heart was found was a diagnosis of effort syndrome made. I might add that all doubtful cases were examined as carefully as they could be, were sent to neighboring hospitals for confirmation as to findings, were roentgen-rayed, etc.

Of particular interest are two characteristics of the types in class of effort syndrome. One was the unusual number of athletic soldiers and officers who belonged to this class, and secondly, was the number of cases that developed with a slight gasing. In the second class of cases when the patient entered the hospital no evidence of a previous gasing attack was found. A certain percentage of cases of effort syndrome would seem to follow an experience with gas. The emotional element was greatly in excess and to this type of case undoubtedly the term neuroses might be applied. In the severe cases of effort syndrome associated with the anxiety neuroses the treatment directed toward the removal of the sources of anxiety mechanism seemed to cure the symptoms that were associated with the heart, and in such cases the suggestion of Dr. Kohn that they were a type of anxiety neuroses, or at least associated with this condition, seems very evident. On the other hand, severe types of cardiac disability following a definite and severe gas experience did not respond in this way to treatment and showed no evidence of improvement under the methods of treatment used in Base Hospital No. 117. They showed no improvement at all and evidently could not be classed as a neurosis type of effort syndrome.

Another group of cases which came under the term effort syndrome seemed to be the result of automatic assimilation. The cases would be perfectly comfortable until some medical officer or other individual would pass by them or question them and then they would develop a remarkably increased rate of breathing, sometimes as much as 50 to 60 per minute, associated with this polypnea there would develop an increased pulse, pallor, exhaustion, etc. Of course here again there was present an effort syndrome that was a typical neurosis.

In regard to the statement of the writer of the paper that cases of effort syndrome could not stand large amounts of tobacco, our experience seemed to be the reverse. All of our cases were smoking a good deal and doing it constantly.

DR. DOCK: This condition occurs otherwise than in soldiers and it is a very striking part of medical history. It was first seen in soldiers and became famous in soldiers in the Civil War and the Franco-Prussian War. It is possible many of such cases were really men who were below par physically who had not been accustomed to any real physical work. In armies they had to do marching and do other things in the way of training that they did not do before. The same thing occurs in civil life. In working in the out-patient department you can pick out effort syndrome cases and if you will follow them up a great deal of light can be thrown on the subject. There is no question that the description that Dr. Wilson gave applies to a large majority of them.

We had some experience with them here in examining candidates for the aviation service. I examined 2,000 men, but as we had to see about fifteen to twenty-nine a day we had no opportunity to keep records; we had to turn them in. They were picked men before they came to us, so they were all supposed to be physically fit. We would find from 10 to 20 per cent. unfit for various reasons; occasionally acute infections, rarely organic heart disease and then functional heart disease. The functional cases we had return two or three times before rejecting. We would get them with the picture of effort syndrome and no evidence of tuberculosis or hyperthyroidism in those I am speaking of, though we had some of these too. Those with effort syndromes were often intellectual men, such as teachers, tutors and instructors. One man I was able to see recently. He was accepted in some other place and was sent to an Illinois training school and then to Fort Sheridan where he had a most marked picture of effort syndrome, was discharged, and sent to me by his friend. I was very much afraid that he had possibly tuberculosis and organic disease. I tried to get him to apply for treatment at the Tuberculosis Hospital. I saw him a few weeks ago and he was absolutely well.

## 2. PNEUMOTHORAX IN RELATION TO EMPYEMA.—By DR. EVARTS GRAHAM.

From the standpoint of pressure relationships the normal thorax may be regarded as one cavity instead of two. Any change of pressure in one pleural cavity is accompanied by practically an equal change in the other so that an equilibrium of pressure exists at all times throughout the whole thorax. In our experiments the changes of intrapleural pressure have been accomplished only with air, but probably the same conclusions would hold for those effected by fluid.

The prevalent conceptions of pneumothorax are erroneous in that they are based on the assumption that when an opening is made into the chest one lung is collapsed and the other maintains respiration. This assumption implies that the mediastinum constitutes a rigid partition between the two pleural cavities. On the contrary, the mediastinum is so mobile that any increase of pressure in one pleural cavity pushes it over into the opposite one so that both lungs are compressed practically equally. No such condition is possible, therefore, of collapse of one lung and maintenance of respiration with the other in a chest with a normal mediastinum.

On the other hand, if the mediastinum has been made rigid by induration as a result of long standing inflammation, or if it has become fixed by adhesions, then a pleural opening on one side will not produce the same pressure changes in both pleural cavities.

The maximum opening into a pleural cavity compatible with life depends on a definite relationship which exists between the amount of air entering the lungs and the amount which enters the pleural opening. The maximum opening compatible with life may be approximately determined by means of the following mathematical expression:

$$X = \frac{V - \frac{R_1}{R_2} T}{\frac{R_1}{R_2} T} a C$$

in which

V is the vital capacity.

R<sub>1</sub> is the rate of respiration before the opening is made (assumed in the normal person at rest to be about 15).

R<sub>2</sub> is the maximum rate of respiration after the opening is made, at which the maximum depth of respiration can be maintained (assumed to be about 60).

T is the tidal air (approximately 500 c.c.).

a is a factor less than 1 (assumed to be 0.8) to allow for greater resistance to the passage of air down the trachea because of greater length of the passage, resistance offered by mucus, etc., as compared with the passage of air through the pleural opening.

C is the area of the glottis (about 2.25 sq. cm. in the average normal).

By means of this mathematical expression it is found that an average normal human adult should be capable of withstanding for a short time an opening of 51.5 sq. cm. (5 x 10 cm., or 2 x 4.1 inches). It is obvious, however, that this value depends to a considerable extent on the value of V (vital capacity) and that therefore individuals who have a large vital capacity will be able to withstand a larger opening into the thorax. For example, in the case of the man described by Peabody and Wentworth<sup>1</sup> who had a vital capacity of 7,180 c.c., an opening of the chest wall with an area of 101.3 sq. cm., or 15.6 square inches, should not be fatal as long as the respiratory muscles were capable of maintaining maximum respiratory movements. There is no discrepancy therefore between these results and the observation that in the war men have been able to maintain respiration with gaping thoracic wounds which seemed surprisingly large.

A double open pneumothorax in a normal chest is more dangerous to life than a unilateral open pneumothorax merely because usually the combined areas of the two openings (and therefore the amount of air admitted into the pleural cavities) is greater than a single opening on one side is likely to be. Theoretically and experimentally effects of practically the same severity result in the case of one or more openings into one pleural cavity as follow the creation of a double pneumothorax, provided that in each case the combined areas of the various openings are equal.

The bearings of these results and deductions on both the treatment of acute empyema and on thoracic surgery in general is obvious. Whenever the amount of air taken into the lungs is limited by the presence of an active pneumonia, with plugging of both air channels and alveoli, whenever there is an excessive demand for air, or whenever there is sufficient weakening of the respiratory muscles to impair compensation, the size of a pleural opening compatible with life becomes smaller; and if any or all of the above factors are present in sufficient intensity, even a very small opening into the pleural cavity will produce death from asphyxia. Since all of these factors are likely to be present to a high degree during the early stage of an empyema of the streptococcus type, early operation with the establishment of an open pneumothorax carries with it an unwarrantable danger.

Special emphasis has been placed on the changes of intrathoracic pressure induced by an open pneumothorax but other results, such as heat loss, danger of infection and disturbance of the systemic circulation, are of great importance.

#### DUNKLIN COUNTY MEDICAL SOCIETY

Dunklin County Medical Society held its last meeting for the year at Kennett, Dec. 2, 1919, and elected the following officers for 1920: President, L. J. Matlock, Kennett; vice president, Paul Baldwin, Kennett; secretary-treasurer, T. J. Rigdon, Kennett; censor, J. J. Drace, Kennett; delegate, Paul Baldwin, Kennett.

The following members paid their 1920 dues: L. J. Matlock, Kennett; W. D. Limbaugh, Hornersville; E. G. Cape, Hornersville; Paul Tipton, Senath; R. E. Martin, Senath; F. W. Speidel, Senath; Paul Baldwin, Kennett; T. J. Rigdon, Kennett; W. L. Gossage, Kennett; J. J. Drace, Kennett; John D. Van Cleve, Malden.

T. J. RIGDON, M.D., Secretary.

1. Clinical Studies of the Respiration; IV. The Vital Capacity of the Lungs and Its Relation to Dyspnea. Arch. Int. Med., 1917, 20: 443.

#### HENRY COUNTY MEDICAL SOCIETY

The Henry County Medical Society met in regular session on Wednesday, December 10, 1919, in the courthouse at Clinton. Present were: Drs. W. Woltzen, president; F. M. Douglass, secretary-treasurer; N. I. Stebbins, E. C. Peelor, W. R. Campbell, and S. A. Poague. The minutes of the previous meeting read and approved. As no lecturer was present and no cases reported, a general discussion was entered into on the venereal disease campaign in all its bearings on the physician and enforcement.

The election of officers for 1920 resulted as follows: Will P. Bradley of Windsor, president; E. C. Peelor of Clinton, vice president; F. M. Douglass, secretary-treasurer; N. I. Stebbins, delegate; W. R. Campbell, alternate; E. C. Peelor, censor for three years.

Dr. G. A. Greeson of Calhoun was received by transfer from Benton County. Dr. Leslie L. Smith of Ulrich was dropped for nonpayment of dues. The by-laws were amended and by unanimous vote the dues for 1920 increased to five dollars.

F. M. DOUGLASS, M.D., Secretary.

#### MADISON COUNTY MEDICAL SOCIETY

On Dec. 12, 1919, at the last meeting of the year and the election of officers for the coming year, the members of the Madison County Medical Society by unanimous vote decided to have a get-together meeting and invited the secretary of the Missouri State Medical Association, Dr. E. J. Goodwin, to attend the meeting to be held in Fredericktown on December 20. Dr. Goodwin came down on Saturday and at 8 p. m., the time set, nearly all of the members met at Dr. Higdon's office, where, after a short session, Dr. Goodwin was introduced and spoke at length on the progress and good already accomplished by the Missouri State Medical Association and the county units over the state. He dwelt at length on the service rendered the government by the physicians of our association in large numbers. He commended our society for the good work it had been doing and spoke very encouragingly of the assistance the state association would render us in clinics and postgraduate work. He gave due recognition to the hardships undergone during the war and the epidemic of influenza by both the physicians in service and those who had to redouble their energies at home, to carry on the work of their own and that left by those who entered the service.

After his address which was enjoyed by the entire membership a resolution was passed thanking Dr. Goodwin for his visit and the president of our society, Dr. Barron, led the way to the confectionery parlor at McKinney's Restaurant, where Dr. Goodwin was set down at the head of the table and our membership on either side sat down to "an oyster stew," where we all spent a splendid half hour. We enjoyed the meeting very much and many were the invitations extended Dr. Goodwin to repeat his visit next year.

M. B. BARBER, M.D., Secretary.

#### MARION COUNTY MEDICAL SOCIETY

Marion County Medical Society met at Hannibal at 8 p. m., January 2. There were present Dr. Hardesty, in the chair, Drs. Bounds, Howell, Waldo, Banks, Bourn, Hill, Hornback, Ross, and visitors, Drs. Fuqua, late of U. S. Navy Medical Reserve, and Ned Hornback.

Dr. Fuqua gave a very interesting account of his postgraduate preparation for the Navy and his work for two years in Cuba, Quebec, and on the high seas on board a transport.

Dr. Hardesty showed very interesting souvenirs from the battlefields of France and Belgium and also war maps and photographs taken from varying altitudes.

MARY S. ROSS, M.D., Secretary.



**MONTGOMERY COUNTY MEDICAL SOCIETY**

Montgomery County Medical Society met December 17, at Regal Theater, Wellsville. Members present: Drs. T. H. Diven, president; George E. Prewitt, secretary, Wellsville; Drs. Nowlin, Geo. E. Munns, D. O. Hudson, E. W. Tinsley, B. F. Menefee, L. R. Williams, Montgomery City. Papers by Dr. Menefee on "Gastric Function Analysis" and by Dr. Williams on "Gastrectomy for Ulcer of Stomach" were read and discussed.

Officers were elected for 1920 as follows: T. H. Diven, Wellsville, president; B. F. Menefee, Montgomery City, vice president; Geo. E. Prewitt, Wellsville, secretary-treasurer.

The regular meeting dates are the second Tuesday in February, April, June, October and December. The next meeting will be held at Montgomery City in February. **Geo. E. PREWITT, M.D., Secretary.**

**SCHUYLER COUNTY MEDICAL SOCIETY**

At the regular meeting of the Schuyler County Medical Society, held on Dec. 26, 1919, there were present Drs. W. F. Justice, J. H. Keller, B. B. Potter, W. A. Potter and J. B. Bridges.

The meeting was called to order by the president, Dr. B. B. Potter at 2 p. m. and the following business was transacted: The minutes of the last meeting were read and approved. Next was the election of officers for the ensuing year, and those elected were: W. F. Justice, president; A. J. Drake, vice president; J. B. Bridges, secretary-treasurer; B. B. Potter, delegate to State Meeting; H. E. Gerwig, alternate.

The program consisted of a clinic on tonsillitis by Drs. W. A. Potter and J. H. Keller. An interesting lecture was given on the subject by Dr. W. A. Potter after which, assisted by Dr. Keller he did a tonsillectomy and removed adenoids by the Sleuder method very successfully. The subject was discussed by a number of the members. It was a very interesting meeting.

**J. B. BRIDGES, M.D., Secretary.**

**ST. LOUIS COUNTY MEDICAL SOCIETY**

Society was called to order at 8:30 p. m., Dec. 11, 1919, by vice president Dunnivant and members invited to take their places at the table to show their appreciation of the dinner provided by the ladies of the Maplewood Baptist Church. Present: Drs. P. N. Davis, O'Malley, Prichard, W. H. Townsend, Corley, Dunnivant, Conway, Suddeth, Reynolds, Vincent Townsend, Eggers, Denny, Jones, Carter, Koch, Wyer, C. L. Davis, Brossard, Miles, Cape. After a more or less wordless testimonial to the excellence of the dinner the Society listened to several musical numbers, which were appreciated. We then got down to business.

The minutes of the previous meeting were read and approved. A letter from the state board of health was read asking that cases of eye trouble be reported to them, especially trachoma, to assist their efforts to stamp out trachoma.

A letter from Dr. Randle, of Lawrence, Kansas, a former member of this Society, asking that a certificate of good standing in the society be issued to him to assist him in registering in Kansas to practice medicine was read. This matter having been referred to board of censors at the last meeting they were asked to report. Its report was to the effect that although the doctor was not now a member of the society, having been automatically dropped for non-payment of dues since 1915, in view of the fact that he had served his country for a year and had lost his practice at his old location on account of his absence in U. S. service and been obliged to go to another state in order to earn a livelihood, the society was under obligation to assist him if possible. A motion was carried to remit the local dues and pay his state

dues for the year 1919, and the secretary instructed to execute and forward to him the certificate of good standing desired, and write him of the action taken by the society.

A resolution was passed directing the proper committee to prepare appropriate resolutions on the deaths of Drs. Samuel L. Inman and James T. Douglas who have recently died.

Drs. Cape and Conway who were representatives of the National Council of Defense, Medical Section, during the war, tendered to the society the records of every physician then practicing in St. Louis County, which were compiled in the course of their duty. By motion this tender was accepted and the secretary instructed to take charge of and keep with the records of the society.

The society then proceeded to the election of officers for the year 1920. Dr. Joseph A. Prichard of Overland was nominated for president. There being no other nominations the secretary was instructed to cast the unanimous ballot of the society for Dr. Prichard. Dr. G. C. Eggers of Clayton was nominated for vice president, and in the absence of other nominations the secretary was instructed to cast the unanimous ballot of the society for Dr. Eggers. Dr. A. Conway of Webster Groves was nominated for secretary to succeed himself, and unanimously elected by a rising vote. Dr. C. A. P. Dunnivant of Kirkwood was elected censor by the unanimous ballot of the society. A vote of thanks was tendered the secretary for his services during the past year.

Upon motion after due discussion the place of meeting was changed to Clayton and the time from 2:30 p. m. to 8 p. m.

After a vote of thanks to the ladies of the Baptist Church for their excellent entertainment the society adjourned to its next regular meeting.

**A. CONWAY, M.D., Secretary.**

**WEBSTER COUNTY MEDICAL SOCIETY**

The Webster County Medical Society held its regular meeting at Forland, on Dec. 17, 1919, at the home of Dr. W. J. Rabenau. Meeting was called to order by Dr. J. S. Sayers, president, at 1:30 p. m. The following doctors responded to the roll call: Drs. Rabenau, Sayers, Atkins, Werner, Highfill and Bruce. The minutes of last meeting read and approved, also the treasurer's report. Several important cases were taken up and discussed. This being our annual meeting the following officers were elected to serve the ensuing year: J. P. Werner, president, Marshfield; T. S. Bruton, vice president, Seymour; J. R. Bruce, secretary-treasurer, Marshfield; M. Highfill, delegate, Marshfield; W. J. Rabenau, alternate, Fordland.

The resignation of Dr. J. W. Good of Fordland was read and accepted. Voted to hold our next regular meeting at Marshfield, March 17, 1920.

**JOHN R. BRUCE, M.D., Secretary.**

**BOOK REVIEWS**

**THE HIGHER ASPECT OF NURSING.** By Gertrude Harding. 12mo of 310 pages. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, \$2 net.

This is a work of extreme value to instructors of nurses and those who intend to study nursing.

In the nursing profession the need is certainly great for the fixation as well as the maintenance of high standards. These standards have been set by Miss Harding with splendid precision. Every word in the book shows the outspoken spirit of a woman who has traveled over the road she tells about; who has faced the problems that she attempts to solve, and

who has worked out the solutions that she offers. There is nothing pedantic and but little quoted. The whole 300 pages are filled with the earnest talk and the burning advice of one who knows whereof she speaks. In the foreword Miss Harding says: "The author, as a result of the years of her experience, has arrived at the conviction that no woman has a moral right to enter the nursing profession with purely selfish motives. It is to this higher aspect of the subject, and to this more exalted view, that the attention and interest of the reader are invited."

The book is recommended to every physician as a gift to a girl intending to study nursing, and to every training school as a part of the course of study for a student. H. E. P.

**NERVOUS AND MENTAL DISEASES.** By Archibald Church, M.D., Professor of Nervous and Mental Diseases in Northwestern University Medical School, Chicago; and Frederick Peterson, M.D., formerly Professor of Psychiatry, Columbia University. Ninth edition, revised. Octavo volume of 949 pages, with 350 illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, \$7 net.

Revision and reprinting of Church and Peterson's "Nervous and Mental Diseases" has been so frequently and so insistently necessary since its first appearance in 1899 that the recurrence of the phenomenon is no longer a matter for discussion but rather a matter of course.

The book has served, as everybody in medicine who has any interest in these branches knows, an extremely useful purpose in the hands of teachers, students and practitioners.

It combines in one volume the work of two men, Church in neurology and Peterson in psychiatry, both masters in their respective fields, and it presents sensible discussion of these allied subjects in compact form, available for study or reference.

Both neurology and psychiatry have advanced much in twenty years and this book, aided by constant revisions, has done its share to further exact knowledge in both branches of medicine. M. A. B.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1919, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**HOYT'S GLUTEN SPECIAL FLOUR.**—A gluten flour containing protein, 80 per cent.; fat, 1 per cent., and starch, less than 10 per cent. This flour may be used when a diet relatively free from carbohydrates is desired, especially in diabetes. It does not make a satisfactory bread, but may be used to prepare muffins, flat cakes, or gruel. The Pure Gluten Food Co., Columbus, Ohio (*Jour. A. M. A.*, Dec. 13, 1919, p. 1843).

**LACTIC ACID-PRODUCING ORGANISMS AND PREPARATIONS.**—Fermented milks have long been used because they were palatable to many or because of an opinion among the laity and among physicians that they were advantageous in certain disorders of the gastro-intestinal tract. A great stimulus to the employment of fermented milk was given by the theories of Metchnikoff regarding intestinal putrefaction, which are, however, entirely unsupported by scientific evidence. No one seriously subscribes to his opinions at the present time, but, on the other hand, there is evidence that the administration of sour milk products is at times bene-

ficial. In pediatrics, fermented milk has found a wide application. By the use of acid-producing bacteria, milks of suitable composition may readily be prepared. For this purpose, bacteria of the Bulgarian bacillus group, usually in association with *Streptococcus lacticus*, have been found particularly satisfactory. There is little evidence showing that organisms of the Bulgarian group can be implanted in the intestinal tract. There is little evidence that liquid cultures of lactic acid organisms are of value as local application to mucous membranes or in arresting putrefaction or suppuration in wounds, abscesses or sinuses. Liquid cultures of lactic acid organisms, and still more the tablets, deteriorate with age. All such preparations must be stored in an icechest and should be marked with an expiration date after which they are not to be used (*Jour. A. M. A.*, Dec. 20, 1919, p. 1885).

**LACTIC ACID FERMENTS.**—In preparing the 1920 edition of New and Nonofficial Remedies, it appeared desirable to the Council on Pharmacy and Chemistry that careful reconsideration should be made of the use in medicine of lactic acid bacteria—and products prepared by means of these bacteria—in relation to practical therapy. A special committee consisting of a physiologic chemist (Lafayette B. Mendel, chairman), a pediatrician (John Howland), an internist (W. P. Longcope), a rhinologist (H. I. Lillie), and a bacteriologist (L. F. Kettger) took up the problem. A circular letter was sent by the committee to a large number of well known bacteriologists, clinicians and manufacturers who might be assumed to have experience or information bearing on the practical use of lactic acid bacilli. Based on the replies which were received, the committee has revised the discussion of "Lactic Acid-Producing Organisms and Preparations" which appears in New and Nonofficial Remedies. These replies showed that the bacteriologists and scientific laboratory workers show far less enthusiasm for the claims of lactic acid bacteria for a place in practical therapy than do the clinicians. It was the general opinion that the Bulgarian bacilli cannot be effectively implanted in the alimentary canal by feeding cultures thereof. The overwhelming preponderance was against the usefulness of cultures of the bacilli in infected sinuses, cavities, etc. The committee recommended that cultures of *Bacillus acidophilus* be not included in N. N. R. at present. The committee considers it important that the Council should continue its control of the viability and purity of cultures offered for sale (*Jour. A. M. A.*, Dec. 20, 1919, p. 1895).

**BENZYL BENZOATE FOR THERAPEUTIC USE.**—VAN DYK AND Co.—A brand of benzyl benzoate which complies with the N. N. R. standards. For a discussion of the actions, uses and dosage, see New and Nonofficial Remedies, 1919, p. 53. Van Dyk and Co., New York.

**LUMINAL.** — Phenobarbital — Phenyl-Ethyl-Barbituric Acid — Phenyl-Ethyl-Malonyl-Urea. Phenobarbital (luminal) differs from barbital (veronal) in that one ethyl group has been replaced by one phenyl group. It is claimed that the introduction of the phenyl group increases the hypnotic power of luminal over that of barbital. Luminal is claimed to be a useful hypnotic in nervous insomnia and conditions of excitement of the nervous system. Dose, from 0.2 to 0.3 gm, increased if necessary to 0.8 gm. Luminal is supplied in powder and as Luminal Tablets 1.5 grains. Winthrop Chemical Co., Inc., New York.

**LUMINAL-SODIUM.**—Phenobarbital Sodium—Sodium Phenyl-Ethyl-Barbiturate—The monosodium salt of phenyl-ethyl-barbituric acid. The actions and uses of luminal-sodium are the same as those of luminal. For hypodermic injection luminal-sodium is used in

(Continued on advertising page xviii)



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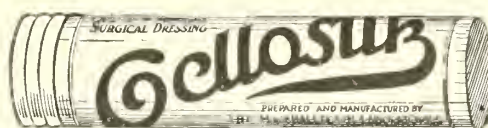
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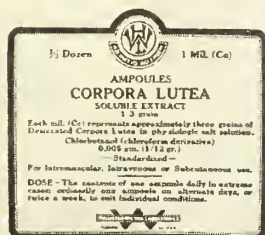
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(Continued from page 90)

the form of a 20 per cent. solution. The dose of luminal-sodium is 10 per cent. greater than that of luminal. Winthrop Chemical Co., Inc., New York.

**SAJODIN.**—Calcium monoiodobenhenate.—The calcium salt of monoiodobenhenic acid. Sajodin is used as a substitute for iodides. The iodine of sajodin, being longer retained, is perhaps better utilized. It is also less liable to produce gastric disturbance than alkali iodides. Sajodin is also supplied as Sajodin Tablets 8 grains. Winthrop Chemical Co., Inc., New York (*Jour. A. M. A.*, Dec. 27, 1919, p. 1939).

#### PROPAGANDA FOR REFORM

**THE NEW BACCHUS.**—No longer should artists—at least, American artists—represent Bacchus astride a wine barrel; the little god should be depicted astraddle a "patent medicine" bottle. As every physician and pharmacist knows, there are on the American market a number of widely advertised and extensively sold "patent medicines" whose most potent ingredient is alcohol. The problem of controlling these alcoholic "patent medicines" can be satisfactorily solved in only one way, and that way is to prohibit the use of alcohol in preparations of the "home remedy" type, that is, in those products which are sold indiscriminately to the public for the self-treatment of disease (*Jour. A. M. A.*, Dec. 6, 1919, p. 1772).

**ANTIMERISTEM-SCHMIDT.**—A letter received by physicians from the "Bakteriologisch-Chémisches Laboratorium Wolfgang Schmidt" of Cologne, Germany, calls the attention of American physicians to Antimeristem-Schmidt. Antimeristem-Schmidt was rather widely exploited some six or seven years ago. It is a preparation claimed to be useful in the treatment of inoperable cancer and as a supplementary treatment after operation for cancer. The treatment has been found without effect and no license for the sale of Antimeristem-Schmidt has been granted by the U. S. Treasury Department and therefore its importation into this country is prohibited (*Jour. A. M. A.*, Dec. 6, 1919, p. 1787).

**THIALION.**—This is an heirloom of the days when lithium salts were supposed to be nature's antidote for all kinds of ailments supposedly due to excess of uric acid. The Council on Pharmacy and Chemistry reported in 1906 that it was not a definite chemical compound as suggested by the chemical formula published by the proprietor, the Vass Chemical Company, but a mixture consisting chiefly of sodium sulphate, sodium citrate and small amounts of lithia. In recent advertisements, Thialion is referred to as "A Non-Effervescent Lithiated Laxative Salt," "a non-hygroscopic, non-deliquescent, granular salt of lithia," etc., but the chemical formula does not appear, nor is any definite statement of composition furnished (*Jour. A. M. A.*, Dec. 6, 1919, p. 1789).

**LUBRICATING JELLY.**—The subjoined formula for an inexpensive lubricating jelly has been used in the German Hospital (now the Lankenau Hospital), Philadelphia, for a number of years: Tragacanth, whole, 3 gm.; glycerin, 25 c.c.; phenol, 1.5 gm.; distilled water to make 300 c.c. The tragacanth is broken in small pieces and put into a wide-mouthed bottle; the other ingredients are added and the bottle is frequently shaken (*Jour. A. M. A.*, Dec. 13, 1919, p. 1852).

**THE PREVENTION OF SIMPLE GOITER.**—O. P. Kimball, J. M. Rogoff and D. Marine publish their third paper on the effect of sodium iodide in the prevention of goiter in school children. They conclude that simple goiter in man may be prevented and that the method may be carried out as a public health measure. Two gm. of sodium iodide given twice yearly seems adequate for the purpose (*Jour. A. M. A.*, Dec. 20, 1919, p. 1873).

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**WATCH YOUR PEP!**

Six thousand eight hundred and eleven members is the enrollment to date, November 28, of 1919 members of the Medical Society of the State of Pennsylvania. Six thousand members for 1920 has been predicted by some observers, the loss being anticipated on account of the increased per capita assessment. Eight thousand members is our goal for 1921 and should be closely approached during 1920. Many component societies in purely rural districts have increased their annual dues to \$10, and have set 100 per cent. as their 1920 goal for membership among the legally licensed physicians of their respective counties. This latter task is more difficult of accomplishment in more thickly populated counties, but the potential workers should be proportionately increased. You, being a worker, will start right by paying your dues at the January meeting and bringing a nonmember to become a new member to the same meeting.—*Pennsylvania Med. Jour.*

**SOME THINGS THE INDIVIDUAL PHYSICIAN MAY ACCOMPLISH**

The individual physician, by cultivating the habit of promptly presenting his bill soon after each case is terminated, and good naturedly collecting the same as soon as circumstances will allow without crowding the poor, will be enabled promptly to meet his own obligations, among the first of which should be his dues to his county society.

The individual physician can show his loyalty to the journals of his county, state and national societies by not subscribing nor writing articles for medical journals that insert advertisements for any article not approved by scientific medicine. It is neither scientific nor honest to have two standards—one for the reading pages and another for the advertising pages. Support the Council on Pharmacy and Chemistry.

The individual physician should place the welfare of his county society before that of any special society.—*Pennsylvania Med. Jour.*

**"THE MEDICINE OF THE NEEDLE"**

In the Belgian Congo, West Africa, is a mission of the Disciples of Christ. In this far away country many of the natives suffer from frambesia or, as it is more familiarly known, yaws. The head of the mission recently communicated with the H. A. Metz Laboratories, New York, acknowledging the receipt of a large shipment of neoarsphenamin, and said that the results in the treatment of yaws were little short of a miracle to the natives who frequently go to the mission and ask for "the medicine of the needle."

Dr. Pierson, the mission physician, says the doctors there see from 200 to 400 cases of yaws in a year and that most of them can be cured by neoarsphenamin, whereas if it were impossible to obtain the drug the cases would go on to the tertiary stage.

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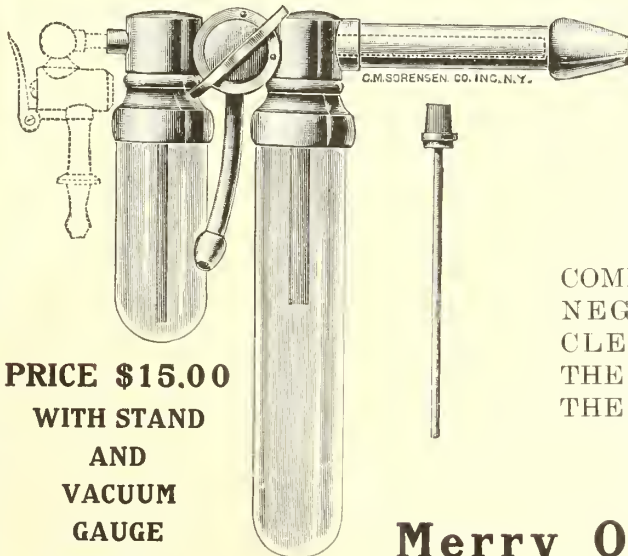
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## STRIKES AND PUTTS

### WILLING TO "COLLABORATE"

A hospital for the treatment of addicts which formerly offered to give commissions to physicians sending cases to the institution has now announced that they will "collaborate" with the physician.

### PAGE DR. CLARK

Whenever the penitentiary physician resigns the governor calls on Dr. Clark of Jefferson City to "fall in." The doctor always falls for it.

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### BOTH IMPORTANT

Dr. Wayland was a pillow in the Presbyterian church, while "Uncle Jerry" was prominent in the Baptist church.—*Kahoka (Mo.) Gazette.*

### PAGE DR. DELAMATER

The anti-vaccinationists ran wild in St. Joseph recently when the board of health enforced the state law requiring all school children to be vaccinated against smallpox, and they staged a mass meeting to protest against the rule. Of course the antis attacked vaccination as a crime; filthy material put into the blood of innocent persons; inveighed against violation of personal rights, and ran the gamut of false statements and misrepresentations so common to all anti-vaccinationists. Dr. W. L. Kenny was an amused listener to the rantings of what the president of the school board called "Bolshevists," and was discovered by one of the leaders who pointed to Dr. Kenny and said, "Dr. DeLamater has been sitting here all evening afraid to say anything." (Dr. DeLamater is health officer of St. Joseph.) Dr. Kenny then arose and asked, "How many of us adults have submitted to this crime of vaccination?" Loud cries of affirmation and raising of hands followed, the leader of the antis being the loudest of all. When they had finished, Dr. Kenny asked, "How many of these have been crippled by this vaccination?" In the silence that followed Dr. Kenny said, "Thank you," and walked out.

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### ORIGINAL ARTICLES

#### ADENOMYOMATA, WITH SPECIAL REFERENCE TO THOSE OCCURRING IN THE BROAD LIGAMENT\*

OTTO H. SCHWARZ, M.D.  
ST. LOUIS

Adenomyoma, as the term implies, means a tumor or mass of tissue which is made up of gland and muscular structures. The muscular tissue is of the nonstriped variety. This smooth muscular tissue with a greater or lesser amount of fibrous tissue forms the matrix of the tumor and the glandular tissue, which in most instances is the exact prototype of the endometrium, is distributed here and there throughout the muscular matrix. Sometimes the endometrium-like tissue is present as only a few islands of glandular tissue and at other times the muscular tissue is actually riddled with these small islands of mucosa. Whether or not these adenomyomata should be considered as tumors in the strict sense of the word, is by no means a settled point. Clinically, in many instances, they are similar to benign tumors, and in other instances they represent more a condition which might be considered as a diffuse hyperplasia. In the literature they are usually referred to as tumors, and in my discussion I shall refer to them as such.

These tumors may occur in many places. They are most frequently found in the body of the uterus, usually as a diffuse nonencapsulated intramural growth. They also occasionally occur in the uterus as submucous and subperitoneal tumors. These growths in the uterus are comparatively frequent. Their frequency, however, is not appreciated by many clinicians. Unless the uterus is carefully examined after its removal, both in the gross and microscopically, as the condition is sometimes obscured by the presence of co-existing myomata, many of these cases will be overlooked.

\* Read before the St. Louis Medical Society, Jan. 13, 1920.

To give an idea as regards their frequency, Cullen mentions that of 1,283 myomata of the uterus, adenomyomata were present in 5.7 per cent. of all cases. The diffuse tumor of the uterus is by far the most frequent type of adenomyoma. The condition may be present of itself, or associated with a few discrete myomatous nodules. The uterus, in the absence of myomatous nodules, will vary in size from being slightly enlarged to a uterus twice or three times the normal size. Such a uterus will be more or less globular in outline with a rather even surface. If the lesion involves only the anterior or posterior wall of the uterus, then, of course, the uterus will be less symmetrical. On sectioning such a uterus one will be struck immediately with the coarse arrangement of the muscle fibers in a definitely thickened wall. Here and there will be seen, scattered throughout the wall, small openings, the size of an ordinary pinhead and smaller or slightly larger in many instances. Many of these punctate areas will have a chocolate-brown appearance. These small points are the scattered gland islands and the brown discoloration is due to the presence of old blood. Not only do these glands, as mentioned above, resemble the endometrium in structure, but they also discharge blood at periodic intervals just as the endometrium does. This proliferation of glandular and muscular tissue is not encapsulated but infiltrates the uterine wall in a very diffuse manner. Occasionally, the glandular spaces are considerably dilated, due to a marked accumulation of blood in their lumina. These cystic spaces are comparatively small when they occur in the diffuse type, but they occur as larger cystic cavities in the subperitoneal and submucous types. The largest are seen in the subperitoneal group where occasionally the cystic spaces may measure several centimeters in diameter. The cystic cavities are always filled with a chocolate-brown semisolid material, the result of retained menstrual blood.

After the uterine distribution, adenomyomata are most frequently found in the rectovaginal septum. It is interesting to note Cullen's ex-

perience with these tumors. Until 1913 he had no experience with a tumor in this location. At that time he became interested in this location of the tumor and ending with May, 1919, he had observed rectovaginal septum adenomyomata in sixteen instances. During the past six months he has seen many more cases of this type of adenomyoma. His experience with this type of tumor is a good example of how frequently one can find a certain lesion when one searches for it in a systematic way. He describes adenomyoma of the rectovaginal septum as usually starting as a small nodule just behind the cervix in the rectovaginal septum. At this stage a nodule is more or less movable and the rectal mucosa moves freely over it. A nodule in this type of case may be free in the rectovaginal septum, or it may be attached to the posterior portion of the cervix. As the growth spreads laterally it also becomes blended with the adjacent anterior rectal wall; later it may invade the broad ligament more deeply, encircle the ureters, or it may envelop the pelvic nerves. It may push down into the posterior vaginal wall, form vaginal polypi, and finally it may break through into the vagina. Lockyer of England, in a recent monograph, dwells at length on adenomyomata of extrauterine origin and collects forty-seven cases of adenomyomata of the rectovaginal septum from the literature. In these he only includes four of Cullen's cases.

Our knowledge concerning adenomyomata, in recent years, is chiefly derived from the contributions of Lockyer in England and of Cullen in this country. Very recently they have been giving much attention to the distribution of these tumors. They have described adenomyoma as occurring in the uterus, rectovaginal septum, ovarian ligament, broad ligament, uterosacral ligament, round ligament, ovary, tube, umbilicus, alimentary tract, and rectus muscle.

Lockyer discusses in great detail the source of origin of these tumors, both uterine and extrauterine, and reviews the various theories which have been suggested. To this work we will refer later when considering adenomyoma of the broad ligament.

My experience with adenomyomata, although comparatively limited, has been most interesting on account of the unusual character of several of the specimens. During the last two or three years I have seen nine good examples of adenomyoma of the uterus, the majority of these cases having been observed during the last six months. Six of these cases were the diffuse intramural variety. One of the best examples of this type was a case of Dr. Lee Dorsett's. In this case the uterus was about four times the normal size. A diffuse thickening was uniformly present throughout the uterus and on section, it showed the coarse fibrillation of the muscular tissue to a very marked degree. The penetrating glands in this case did not show up so clearly

in the gross on account of absence of blood in their lumina. This can be explained by the fact that the glands only penetrated the inner half of the uterine wall and therefore their continuation with the glands of the endometrium was still uninterrupted. This case I shall explain more clearly by means of illustrations. These uterine adenomyomata include also two submucous adenomyomata and also one of the subperitoneal type. The latter tumor was removed by Dr. Barney Brooks in the course of a laparotomy primarily for appendicitis. It consisted of a nodule  $1\frac{1}{2}$  cm. in diameter, and on section was made up of smooth muscular tissue and contained numerous uterine glands. It was situated at the fundus of the uterus near the right cornu.

Recently I have reported an adenomyoma which occurred in the rectovaginal septum and also one which occurred in the ovary. The rectovaginal septum case was important because it represented the growth in its earliest stage. It was present as a small movable nodule, a trifle less than 1 cm. in diameter, behind the cervix, but not connected either with the rectum or the cervix. The ovarian case was important because the ovary is a most infrequent site of adenomyoma. Only a few well-described cases are reported in the literature. This group is also particularly interesting when discussing the origin of these tumors.

One of my most recent experiences with adenomyomata has been with the tumor occurring in the broad ligament and it is through the kindness of Dr. Crossen, who removed the tumor, that I have been given the privilege to report this case. Before taking up the history of the case and the description of the tumor, it may be well to mention something of the experience of others as regards the tumor in this location, and also discuss somewhat the question of the origin of these tumors, because the tumors in the broad ligament have given rise to considerable discussion as regards their origin. From the several theories that have arisen it seems possible that no one theory can hold for all cases. Cullen, in his book on "Adenomyoma of the Uterus," describes a case of broad ligament adenomyoma in which the tumor was 10 cm. in diameter and continuous with a submucous growth 7 cm. in diameter. Both portions showed marked cystic dilatation of the gland. He mentions, while discussing the tumor in this situation, two interesting cases of Breus recorded in 1894. The first case was that of an immense cystic tumor in the right broad ligament, containing 7 liters of grayish-brown fluid. The tumor was partly cystic and partly solid. The cavities were smooth and were lined with mucous membrane. Breus thought this tumor of uterine origin that had spread out the folds of the broad ligament. In the second case the tumor was the size of a child's head,





Fig. 1.—Drawing showing mass extending into the right broad ligament, between tube and round ligament and not connected with either of these structures.



Fig. 2.—Diagrammatic drawing, longitudinal section showing the cystic cavity with wall and canal running through solid portion. The black area represents the cavity and canal which was filled with partially clotted blood.

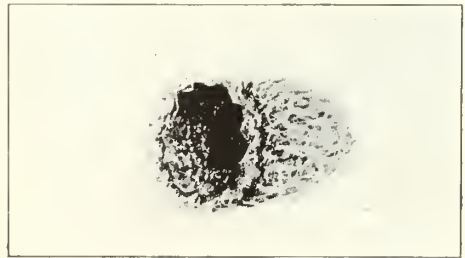


Fig. 3.—Drawing of solid portion; roughened surface represents the muscle tissue. The darkened depressed area represents the median end of the cystic cavity and the black area in the center of it represents the beginning of the canal through the solid portion.

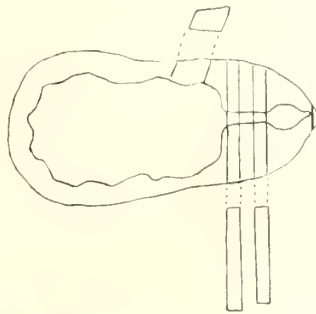


Fig. 4.—Diagram showing areas from which sections were taken.

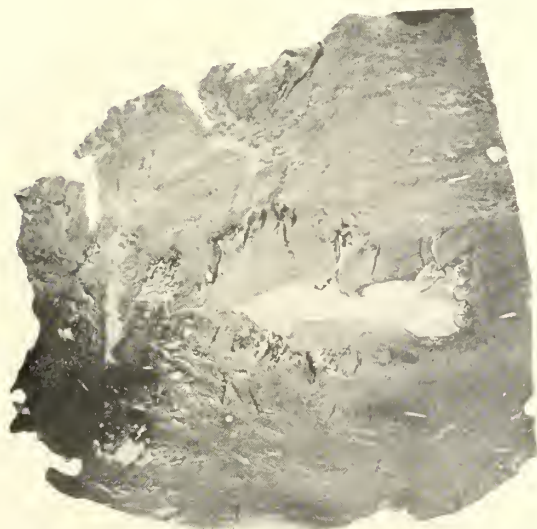


Fig. 5.—The cross section of solid portion just median to the large cavity showing canal at its widest portion and showing the muscle structure of the solid portion.

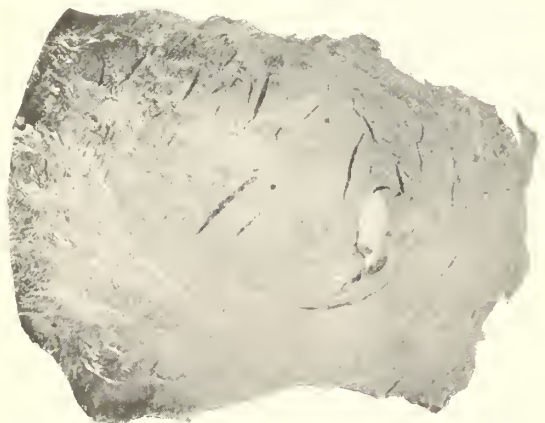


Fig. 6.—Cross section through the center of the solid portion showing the central canal of the surrounding muscle tissue.



Fig. 7.—Lining of cystic portion just lateral to the beginning of the solid portion, shows a single lining of low columnar cells; the endometrium-like stroma is markedly thinned out at this point. The cavity contains fibrin and red blood cells.

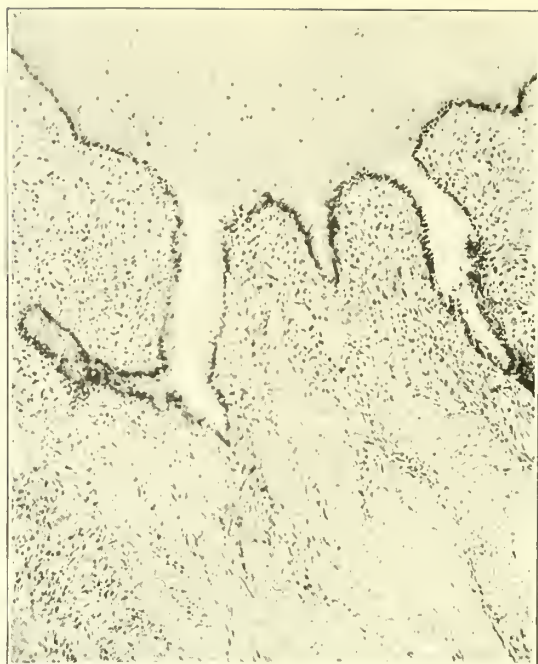


Fig. 8.—High power of Figure 5, showing lining of the canal. Note the blood in the cavity, glands dipping into the musculature and the cytotogenous stroma immediately below the epithelial lining.



Fig. 9.—High power of Figure 5. Another area showing same features as Figure 8 and also a gland deeply imbedded in the muscle tissue.

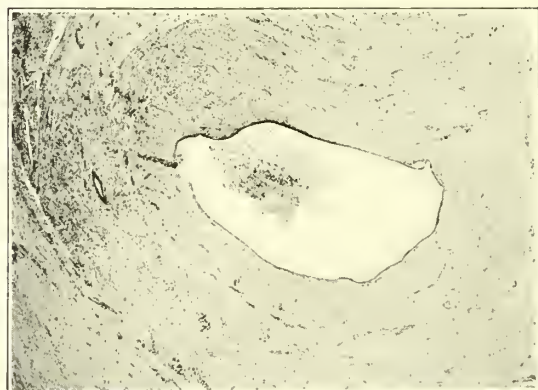


Fig. 10.—High power of Figure 6. Canal lined by a single layer of low columnar cells. Blood in the canal, little or no cytotogenous stroma and one gland imbedded deeply in the musculature.



Fig. 11.—Section through the very tip of the median portion of the solid part of the tumor. In the lower left hand portion there is a small canal lined by low columnar epithelium. This is taken to be the remnant of the main canal. The other perforated areas with no lining contained many red cells, which do not show in the photograph. In the upper right hand portion of the picture are two glands and another in the left hand side near the middle of the picture.

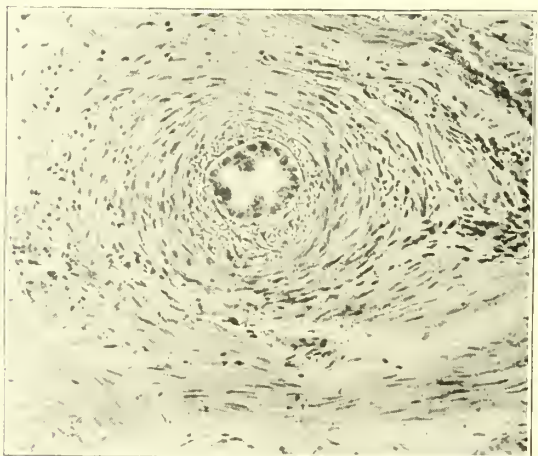


Fig. 12.—High power of gland in the extreme left portion of last picture, showing a layer of cytotogenous stroma which appeared edematous and which was surrounded by smooth muscle tissue.



extending from the posterior portion of the uterus, and was covered by the peritoneum of Douglas' culdesac and the left broad ligament. On section, this tumor was composed of a mass of myomatous tissue, in the center of which were several cavities. These cavities varied in size from a pea to the size of an apple, and were separated from each other by rather thick partitions. Several of the cysts communicated with each other. They were lined with columnar ciliated epithelium and were filled with a chocolate-brown fluid. The large cysts could be traced through the uterine wall opening up into the uterus just above the internal os. Breus considered this tumor a cystic subperitoneal and intraligamentary myoma. Cullen also mentions two other cases of cystic adenomyoma of subperitoneal variety. As they only involve the broad ligament in a very limited degree we shall not consider them here.

Oscar Frankel, in 1914, in Liepman's "Handbuch," mentions adenomyomata as occurring in several pelvic structures, but he does not mention them as occurring in the broad ligament. Lockyer, in 1918, in his extensive monograph on "Fibroids and Allied Tumors," discusses under the heading of extrauterine adenomyomata, adenomyomata of the broad ligament, in a rather extensive manner. He mentions here five cases, one reported by Robert Meyer. This was a small nodule in the parametrium. The origin of this small growth was in the duct of Gärtner. Three cases reported by Jacobs were mentioned. The first case was a nodule the size of a cherry, lying in the broad ligament. This tumor contained many glands surrounded by a cytogenous stroma. The serosa of the broad ligament was found to dip into the mass and Jacobs considered that the epithelium of the glands was of peritoneal origin. Jacobs was of the opinion that the second case had its origin as a result of an inflammatory process in the tube, and the third probably congenital in origin. As a fifth example, Lockyer mentions the case of Semmenlink and Joselin de Jon. In this case the growth was situated in the right broad ligament and extended between the uterus, tube, and ovary, reaching the hilus of the ovary and even entering into the ovarian substance. Anteriorly, it had reached the cervix and posteriorly was attached to the back of the uterus.

From the foregoing cases, one can readily see that no single source of origin holds for these cases in the broad ligament. Lockyer, in discussing the etiology of these tumors in the broad ligament, states that adenomyoma is an infiltrative process and is histologically benign. It is destructive only in so far as it alters the tissues invaded and it does this in a totally different way from a malignant growth. On account of its infiltrative character, it can spread into the broad ligament from several sources,

and he mentions as these sources, first, from the tube, the growth spreading from a so-called adenomyositis of the tube; second, from the cervix, and, third, rectovaginal septum, as in Leith's case. In these migrations he considers a preceding and accompanying inflammatory process as the underlying factor. Another method is that suggested by Cullen, the growth extending from the uterus in between the leaves of the broad ligament just in a way that intraligamentary myomata do.

In discussing the etiology of adenomyomata as a whole, it is certain that the diffuse type has its origin in the wall of the uterus, and that the glandular portions are directly continuous with the glands of the endometrium. For this knowledge, we are indebted to Cullen, who in his series of 50 cases of diffuse adenomyomata of the uterus, was able to trace the glands to the cavity of the uterus in every instance. This theory is known as "Cullen's Mucosal Theory." Other theories, which may be mentioned, are the Wolffian theory of von Recklinghausen, the embryonic theory from Müllerian tissue; an inflammatory process plus mucosal invasion; the serosal theory of Iwanoff; and the epithelial heterotopy theory of Robert Meyer. To anyone who is interested in the question of the origin of these tumors, I will refer them to Part II of Cuthbert Lockyer's admirable monograph, "Fibroids and Allied Tumors." Leo Loeb, in a discussion on adenomyomata of the ovary, states that the embryonic misplacement theory is to be considered chiefly in the origin of these extrauterine adenomyomata. He further states that no positive statement can be made from individual cases or from groups of cases, but that questions of this kind can only be cleared up by experimental investigations.

There has been some discussion as to whether or not these tumors can be recognized clinically. In cases of diffuse adenomyomata of the body of the uterus uncomplicated by discrete myomata and in those cases of adenomyomata which occur in the rectovaginal septum, it should be possible to diagnose a considerable percentage of these clinically, or at least be suspicious of the character of the existing lesion. In cases in which the body of the uterus is involved, two factors are usually present: a marked dysmenorrhea with no pain during the interval and a prolonged and profuse menstrual period. Metrorrhagia is almost always absent. When we have such a history of rather long standing in a woman who has not been pregnant, or has had only one or two pregnancies, given that the uterus is slightly and more or less regularly enlarged, we can suspect adenomyoma of the body of the uterus. Those tumors of the rectovaginal spaces should also be suspected clinically. The chief symptom in these cases is pain: pain on coitus and pain on defecation; tenderness on

examination and increased tenderness during the menstrual period; in the later cases, bloody-stained vaginal discharge, and obstinate constipation. The absence of inflammatory history and a comparatively normal cervix, which is not involved in a malignant process, should help to distinguish these growths from an inflammatory, or a malignant, infiltration. In the case of a small discrete tender nodule in the rectovaginal septum, adenomyoma should be considered first.

The case which I wish to lay particular emphasis upon this evening is a case of broad ligament adenomyoma. In this case the patient was 26 years of age, and married. Her menstrual history began at 14, was always fairly regular, twenty-eight day type; five days' duration and moderately profuse. At times there was menstrual pain, and usually there were clots. Her present illness started in the summer of 1917, with dull-aching pain in the right lower quadrant, at first intermittent and slight, becoming more severe for a few days following the cessation of menses, and then disappeared almost entirely until the next period. No pain noticed during the flow. When pain is present it is aggravated by exercise. The patient was first seen by Dr. G. D. Royston in October, 1918. His examination revealed nothing of importance except a small nodule, the size of a pea, near the right cornu, and a slightly enlarged right ovary. The uterus was freely movable and not enlarged. The patient was given palliative treatment, but in April, 1919, the pains again became more pronounced and were particularly increased during the menstrual period. At this examination the nodule, which was noted on first examination, was now the size of a walnut. In August, 1919, after a few months of no particular pain, considerable pain was again experienced at the menstrual period. At this time she was advised to have a gynecological consultation and get another opinion. A question of chronic appendicitis was considered, and she was examined for this condition by a gastroenterologist, who reported negative findings. The patient was operated on at the Barnes Hospital by Dr. H. S. Crossen. The nodule which was described by Dr. Royston was present in the upper portion of the broad ligament, the size of a walnut, between the tube and the ovary and in contact with the uterine wall at its median extremity. The broad ligament was opened and considerable difficulty was experienced in separating it from this structure. The lateral portion, which was cystic and was covered by a wall about  $2\frac{1}{2}$  mm. thick, was ruptured, leaving behind a solid portion about 2 cm. long and  $1\frac{1}{2}$  cm. wide at the cystic portion, tapering toward the median line to about  $\frac{1}{2}$  cm. This median extremity was excised by cutting slightly into the uterine wall where it was attached. The uterus was

not enlarged. Continuous with the cystic portion was a canal which ran through the center of the entire solid portion. The cystic portion contained a chocolate-brown fluid, as did also the canal. The dimensions of the canal, beginning at the cystic portion, were about 3 mm. by  $1\frac{1}{2}$  mm.; from this point it tapered to about 1 mm. at the middle of the solid tumor; here it became dilated slightly and again became constricted near the median end. On microscopic section, the cavity was lined by low columnar epithelium, under which there was a cytogenous stroma, but no glands underneath the lining. Just median to the cystic portion the canal was lined everywhere by columnar epithelium, under which was a cytogenous stroma similar to that of the endometrium, and in whose substance there were imbedded typical uterine glands. This lining was continuous throughout the entire canal, the glandular structure being found in most places. In a few portions they are absent. The cavity was traced throughout the entire length of the tumor. The smooth muscular tissue made up the chief portion of the solid tumor and surrounded the cystic portion in a very definite layer about  $1\frac{1}{2}$  mm. in thickness. From this description it can be seen that we were dealing with the adenomyomata of the broad ligament which contained a central canal that was definitely connected with the uterus by a constricted median extremity and with the canal traceable into the substance of the uterus. This case, therefore, must be considered as coming from the uterine wall, pushed into the broad ligament in the manner Cullen describes in discussing the origin of these tumors, *i. e.*, they are pushed out on the side of the uterus similar to ordinary intraligamentary myomata.

819 University Club Building.

#### SOME OBSERVATIONS ON THE TREATMENT OF SYPHILIS\*

WILLIAM K. TRIMBLE, M.D.  
KANSAS CITY, MO.

Since syphilis is still with us in increasing proportions an all important question remains as to its treatment. While the disease has been fought in a therapeutic way for years its treatment on the whole has been rather unsatisfactory. The view held by the average clinician that he has effected a cure when all active symptoms of the disease have disappeared is responsible in a measure for many of the late manifestations of the disease. Another view far too common is that syphilis is a simple matter requiring a few doses of arsphenamin and some mercury when the patient will be

\* Read at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.



cured is likewise responsible for much late lues. A view nearer the truth would be he who cures syphilis performs miracles.

Primarily three general types of this disease come under our observation for treatment: the early, the late and the congenital cases. In late and in congenital cases we are justified in directing treatment to the relief of symptoms only. In fact in many cases the relief of a symptom becomes the all important object. In primary lues our concern is not so much with the relief of symptoms as it is with the possibility of a cure, and here lies the pitfall. Do we cure primary lues?

After a careful review of some 4,000 Wassermann tests I am forced to the conclusion that we do not. These conclusions are not drawn from a few pathetic cases having had their primary infection years ago and having had what may be considered adequate or inadequate treatment alone, but from more recent cases as well, cases having had their infection but a few years ago and having had modern intensive treatment. In fact one can not help being impressed with the long periods of latency following adequate mercurial treatment alone as compared with the shorter periods which follow arsphenamin treatment alone, whether this treatment be considered sufficient in amount or not. Also, the mild and often obscure late manifestations, when they do occur, following mercury as compared with the sharp and often stormy manifestations following arsphenamin treatment. What may be the proper treatment for early syphilis it is difficult to say.

At various times and not widely separated competent syphilographers have proposed various procedures. Cauterization and excision of primary lesions for the purpose of modifying or protecting the victim against systemic invasion was early advocated. Those who recommended these procedures were soon convinced of the utter futility of the methods and as a result for years no local therapeutic care has been directed to primary lesions. With the introduction of arsphenamin hope again arose that patients may be protected against systemic invasion. After a number of years of careful observation we are forced to admit that the early use of this drug likewise fails to protect. Quite recently there has been proposed a so-called intensive treatment method. This method more than any other offers the greatest hope of doing good but even here the good results obtained are more in the way of immediate protection to the innocent members of society. This is as it should be and is the principal reason why the intensive method should be used in the treatment of all early lues. So far as the patient is concerned, in many cases at least, one doubts the superiority of this method. The subsequent course of many cases is such

as to lead one to believe that they would have done better had they been permitted to proceed on other courses. The two following cases will serve to illustrate:

Mrs. G. was exposed to her husband in such a way as to exclude all possibility of her escaping infection. She reported for examination twelve hours after noticing a slight vulvar irritation. Examination revealed a minute lesion. Dark field examination showed treponemata to be numerous. The Wassermann test was negative. She received 3 gm. of salvarsan within four weeks, the initial dose being given on the day of the examination. With this she received 4 gr. of salicylate of mercury. The mercury was continued until she had received 14 grs. On account of a change in her residence to another city she discontinued treatment with me but was instructed to continue in the care of a physician. For the following three months her treatment was inadequate, being pills by mouth. Four months after leaving me she returned with an extensive macular secondary, fever, headache, dizziness, a distinct Rhomberg and with exaggerated knee jerks. Blood and spinal fluid Wassermann test 4 plus positive, the gold showing a five point reduction to the seventh tube, cell count 120 and a positive globulin. Subsequent vigorous treatment has not entirely relieved her of some of her most dangerous symptoms.

Mr. H. Dark field examination of the exudate from a four day old genital lesion showed treponemata numerous. Wassermann negative. Patient received 2.4 gm. of salvarsan in three weeks. This was followed by salicylate injections and after the fourth injection the patient returned with a sore mouth from the lesions of which treponemata were found in large numbers; 3.6 gm. of neosalvarsan was given in the following three weeks after which the patient was free from symptoms. After two months of mercurial treatment the patient developed a tertiary squamous lesion on the glans. Subsequent treatment leaves the patient in a doubtful state.

One may ask why this should be? A proper analysis is difficult. I am inclined to the view that one primary fault lies in the too universal acceptance of the specificity of certain drugs. It is interesting to note the indomitable faith older authors placed in mercury; what prognoses almost reckless they made to their patients as to a cure, the matter of marriage and even as to progeny. This faith in recent times has not been transferred to arsphenamin. This faith in the action of drugs has led to another fault. How many physicians in the course of the treatment of a given case concerns himself with the question of acquired immunity? To me it seems the patient's own immunity or the readiness with which he is able to elaborate immune bodies in the presence of an infection is the most important single factor in the well-being of a patient. Long periods of latency may be rightfully attributed to an acquired immunity and not wholly to the treatment received. I believe one would be safe in saying that the most unfortunate state in which a patient could be found is where he harbors treponemata and at the same time has nothing but arsphenamin or mercury to protect him.

The course of the two above cited cases may be taken as due to a lack of acquired immunity.

Neither had sufficient systemic invasion to stimulate immunity nor had they sufficient treatment to destroy all the original infectious material. It is not possible to judge how much treatment a case should have or how vigorously it should be given.

On the whole late lues calls for that type of treatment which will relieve the patient of his objectional symptoms. The average type of treatment in late lues is quite sufficient and seldom goes amiss. Special manifestations of course call for special consideration but will not concern us here.

There are two types of late lues which I wish to consider. The latent cases which, so far as the usual manifestations are concerned, are symptomless and still carry a positive Wassermann; and the opposite type, or cases with rather vague and indefinite symptoms but distinctly traceable to a specific infection and yet show a negative Wassermann test. With many physicians the appearance of either of these types is a signal for active and energetic treatment with both mercury and arsphenamin. In at least a considerable number of these two groups this procedure is not justifiable. The explanation may be found when we consider the character of the infective organism and the reaction on the part of the host. The *treponema pallida* are highly anaerobic organisms and may be said to invade the host along more or less anaerobic channels, particularly along the endothelium of the lymph and blood vessels. A study of the distribution of *treponemata* in primary lesions show that they find their way from between the prickle cells of the mucosa along the endothelium of the blood and lymph vessels—vessels whose endothelium they have stimulated to the point of vessel obliteration. Also in the lymphatic connective tissue spaces which have previously been rendered anaerobic by edema and by plasma cell infiltration. The organisms are found in the blood stream only at such times as when the lymphatics are filled or at the height of the septic stage. Immediately following a secondary the organisms seek those places within the host having an oxygen tension best suited to the growth of the particular strain. At this time large numbers of the organisms disappear due to the new specific antibody content of the host, a phenomenon which in no way differs from that following the introduction of any foreign protein substance into the body.

The presence of the positive Wassermann in the symptomless case may be in many cases explained by a partial state of hypersensitivity, a state in which the patient may possess a fairly high degree of immunity to the infecting organism and at the same time be highly sensitized to some part of its protein poison. A type of this may be explained by the following:

Mrs. M. contracted a tonsillar primary which was followed by the usual secondaries. She was referred to me for a Wassermann test which was 4 plus positive. She received four doses of salvarsan followed by 20 injections of salicylate. After four weeks' rest she showed a 4 plus positive. She was given four more doses of salvarsan and 30 injections of salicylate. After six weeks' rest she again showed a 4 plus positive. She received four more doses of salvarsan and 30 injections and after six weeks rest she was still 4 plus positive. During this time she lost 20 pounds in weight and was not in a good state of health. She was advised to take a rest which she did, going to Colorado Springs, where she remained for some six months. During this time she received absolutely no medicine. On her return she had gained 35 pounds in weight, showed a negative test and was in a superior state of health. Previous to her vacation it was suggested that this might be a Wassermann fast case.

The so-called Wassermann fast cases may have their explanation in the phenomena of hypersensitiveness. If this be the case the best line of treatment would be similar to that used in the care of the hypersensitive stages of tuberculosis and certain cases of systemic infection. The above case tends to illustrate this possibility.

The opposite type, or those showing symptoms with a negative test, may lack sensitization. The older clinicians previous to the introduction of the Wassermann recognized in this class of cases the necessity of using the nonspecific drug, potassium iodid or the iodids. In many cases they found this drug to give the best results with no other explanation than that it "opened up the lymphatics." It is interesting how expressive this phrase is—drugs which tend to produce a state of sensitization. In this later type the organisms are harbored in the most highly anaerobic tissues of the body and as a result what immunity the patient possesses may be largely local. This is quite sufficient to protect under ordinary conditions even for years. Arsphenamin can be used with excellent results but in many cases I question its superiority over the iodids. The action of these two drugs, however, may be considered very similar. Both have the power of increasing the oxygen tension of the tissues of the body and by so doing exercise a deleterious influence of specific virus.

#### CONCLUSIONS

1. In the treatment of syphilis we are placing too much faith in the specificity of drugs.
2. We are as a rule giving drugs too much with the idea in view of forcing a specific cure.
3. In our treatment we give too little consideration to the immune processes that must take place.
4. Syphilis can not be cured and the best treatment is that which will give the patient the longest lease on life and usefulness to himself and society.

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# A CRITICAL ANALYSIS OF THE PRESENT-DAY ATTITUDE OF MEDICAL SCHOOL CURRICULUMS TOWARD THE SCIENCE OF THERAPEUTICS\*

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While medical schools of the highest standards and requirements have seen fit to develop several fields of activities within their scope, oft at an outlay of tremendous expense, involving frequently the employment of full-time professors and research men, it is an ironic fact that these same medical schools in their pursuit after new and higher ideals in certain fields, have to a great extent emulated our theological brethren. For, like religion, medical schools seem to have lost sight of what is probably the most important function for which they have been established.

Just as in religion, the great function of modern theology should, according to the precepts of the Nazarene and law-givers before him, resolve its endeavors toward the consummation of the brotherhood of man, so are medical schools presumably calculated to endow a physician with the attributes which will make of him a master of the therapeutic material with which Nature has so munificently endowed the universe and with which he is to meet the foe of mankind—disease at the bedside.

The caustic irony which the cynic is ever ready to utilize is that, instead of keeping sight of their respective missions as outlined above, religion has proceeded to build fences and wall off mankind among themselves by ever increasing sects, creeds, schisms, dogmas and what not; and likewise medical schools have relegated the science of therapeutics to a grotesquely inadequate corner of the medical curriculum, thereby branding that study as a comparatively unimportant branch of the course of study in medicine.

I am aware that this is not by any means a new thought or conception. In fact, among the older members of the profession this practice has come to be regarded as a seemingly necessary evil for which no one seems potent or willing to suggest a remedy, and a discussion of the topic is generally regarded as an indulgence in trite platitudes. Likewise, the men who have the power to change the state of affairs have unfortunately manifested a lethargic torpor and disdain in this direction that promises to last indefinitely, if their attention is not called to the state of affairs that exists today, and which is in a lesser way continually undermining the prestige of the medical profession.

If the members of all professions evinced the timid attitude which has characterized that of

physicians of this country in their acceptance of a medical school curriculum, which they all sooner or later discover to be essentially wrong, merely because they fear perchance to tread on the sensibilities of faculty members who have assumed a supercilious attitude toward therapeutics, then we could surely have bid farewell to a great deal of progress in the various professions before now.

No medical or other faculty has the moral or persuasive or any other right to consider its curriculum efficient and potent until it has ascertained its course of study to be so, by gathering all available data from among the profession and particularly its own graduates. This has certainly not been done heretofore, as this paper will endeavor to show.

Fortunately, there are never wanting men who have the courage of their convictions; who do not fear to attack a system that is not delivering the goods to the great majority of our graduates, but seemingly caters to a select few to whom time is an asset; or to those who take up medicine for a pastime; or who seek renown in some special field of medical endeavor, but seldom come to the bedside to utilize the science of therapeutics; therefore this thesis. Let us, then, in a logical and dispassionate manner analyze the situation in a sincere effort to deduce the cold facts.

The man who enters a medical school with the object of attaining an M.D. degree, has surely not determined before hand that he will become an internist, a surgeon or a specialist in some other field of medical endeavor. He has before him presumably a vision of becoming primarily at least an adept in the art of medicine, sufficiently so to meet disease and combat it with the full force of the armamentarium which the medical school has presumably placed in his hands.

In most medical schools of proper standing today the student receives an excellent training in the major studies, anatomy, chemistry, pathology, physiology and their associate branches. Pharmacology receives more or less attention in proportion to the ideals of that particular medical school, and in most instances—according to catalogues—resolves itself to experiments involving a few and select drugs on quadruped mammals. Nearly all schools offer a smattering of the special fields of medical endeavor with a certain amount of surgery and usually a good all-round course in general medicine. Therapeutics, which is in reality the acme, in fact, the *modus operandi*, of the graduated student's medical efforts, is given on an average of one or two trimesters, or at best, semesters, in most medical schools of the United States for a two or three hour week.

In this connection I desire to state that the data offered throughout this paper was gleaned

\* Read before the St. Louis Medical Society, Nov. 25, 1919.

from catalogues of medical schools accredited as being the leading ones in the United States of America. They include Jefferson, Johns Hopkins, Rush, Yale, Cornell, Leland Stanford, Washington University, St. Louis University and several others. The Jefferson Medical School is the only medical school in the United States that considers therapeutics of sufficient worth in its medical curriculum to offer 279 hours during the four scholastic years, under the heading of *materia medica* and therapeutics. In sharp and unfortunate contrast with this stands out the time devoted to therapeutics in the two medical schools in St. Louis. The Washington University Medical School offers twenty-two hours in therapeutics and the St. Louis University Medical School offers thirty-two hours. Harvard ignores the study entirely as a distinct subject.

The result becomes easily and uncomfortably evident. The student of even our highest standardized medical schools has studied for an average of forty to fifty hours of a two or three hour week, the most important drugs in the *Pharmacopeia*. The majority of these drugs he has never seen and in all probability will never become conversant with their physical properties, except regarding that which he has heard of them in a didactic way and from the few select drugs which he has handled in the pharmacologic laboratory.

One can readily assume now why it is that the average physician on being questioned by a patient as to the character of the prescription which he has ordered, must needs summon a good deal of sang froid which he does not feel, and appear very sapient, but I do not desire to affect the sensibilities of my audience by the mention of actual anecdotes relating to ludicrous mistakes made by graduates of our very highest schools, evidencing a lack of knowledge of even the commoner and best known drugs during my experience as a pharmacist.

When by force of circumstances the newly made M.D. is hurled into the whirlpool of general practice and finds himself confronted by conditions and symptoms complex which his medical training may well make him able to diagnose, yet, on attempting to meet these very conditions by proper medication or other therapeutic measures he is suddenly confronted by the fact that on account of the meager information he received in that branch of medicine he has in most instances forgotten the greatest part of the subject. And as for constituents and dosage of drugs with which he might desire to proceed against conditions, the nebular hypothesis of Swedenborg is probably more definite and tangible to him at the moment. In fine, it is no secret that the mind of the young physician is in a bewildered maze when he attempts to select from Nature's great laboratory two or three

substances to utilize for a given case which he is called on to meet himself. If he is a sapient individual he will usually seek the abstruse assistance of an abridged manual of therapeutics tactfully hidden in a generous sized pocket.

It is felt that the attitude toward therapeutics is one of the fallacies of medical education today, and is a potent factor in causing the average newly graduated physician to make a speedy exit from the realm of general practice and seek some specialty; hence the overcrowding of the special fields in medicine. In other words, the medical school has failed to make of the physician a master of the very tools with which he is supposed to be equipped. Small wonder is it, then, that the laity, which is only too critical and discerning, has become cynical and pessimistic anent the prowess of the young physician. No doubt every physician is familiar with the trite axiom from the layman denoting fear of the young physician's prescription, and there is little doubt but what a great deal of harm has accrued to the profession as a whole on account of this very attitude of the laity.

While there is little need for apology in uttering what even to the casually trained observer is an evident truth, yet I crave indulgence for making the following unvarnished statement, to wit: that the graduate of a Class A school of pharmacy, such as is represented by the St. Louis College of Pharmacy, attaining the Ph.G. degree, is better able and qualified to administer the proper medication where the diagnosis has been made for him than the average graduate of any medical school in the United States of America, barring the Jefferson Medical College, which, as has been stated before, devotes 279 hours to therapeutics during the four years in medicine. In order to lend weight to the above extreme assertion, I desire to state that this conclusion has been reached after an observation extending over a period of twelve years as an active pharmacist and over ten years in the general pursuit of medicine.

It might be argued by our captious friend, the "therapeutic nihilist," that we are trying to get away from the practice of loading patients with drugs. Fine, surely! and a consummation devoutly to be hoped for. But a calm deduction of the future from the progress made in the past in this regard immediately relegates this objection to the land of Utopian dreams. Next we anticipate our sophisticated friend who states that therapeutics in the general sense is accompanied with too much empiricism, that we depend to a great extent on our memory and imagination for the adapting of drugs and combination of drugs to special conditions. To this one can reply that it is the very failure of the medical schools to teach the student the special properties of the individual drugs that causes these manifestations, as evidenced by the shot-



gun prescription, etc. And besides, what professional man of any pursuit or specialty, so bold as to venture the assertion that a certain amount of empiricism and utilization of the imagination do not enter into his work. We can think of none except the research man, and he is not at all times exempt.

The statement is often made that we have such a large *materia medica* that it would be folly to attempt the teaching of their physical and therapeutic properties to the medical student. This may have been true in the distant past, but certainly does not hold good today. For while it is true that many drugs of doubtful potency or even no value continue to be utilized, so it is conversely true that many valuable drugs are overlooked at the present time because the physician of today knows little about them or, what is more plausible, he has in all probability never heard of their existence.

These same drugs being overlooked by our medical schools has caused them to be abandoned by the profession and given rise to the well-known proprietary evil. There are never wanting shrewd druggists and capitalists who recognize the value of these neglected drugs and are willing to expend a fortune in exploiting them to the profession and only too often directly to the public. These preparations are usually put up in elegant form and accompanied by descriptive literature lauding their virtues to the very sky. Is it any wonder, then, in view of the attitude of our medical schools, that physicians fall for these empiric and expensive preparations which take the patient's extra money and a chunk of the druggist's earning to the promoter's pocketbook, simply because the capitalist has done what the medical school should have accomplished, namely, teach the physician the therapeutic value of the drug.

After much has been said and done, and with all due respect to our specialists, particularly our surgeons, a fairly correct computation of the number of cases requiring therapeutic measures dependent on or associated with drugs, would so far outbalance the number of cases requiring other means of treatment that it would simply add another indictment to those already extant against the indifference manifested by our medical schools toward the study of therapeutics.

One of the frequent occurrences in the average reputable drug store of the past and today is the entry of a reputable physician asking Mr. Druggist: "What would you prescribe in this case? I have used this and that, and am come to the end of my rope." Under present circumstances it is a wise physician indeed who cultivates his druggist's friendliness in this regard. With many apologies, I desire to state that during my experience as an active pharmacist, hardly a week would elapse but that it was found necessary to call up a physician who was pre-

scribing a teaspoonful of Fowler's solution at a dose or bent on some like perilous venture; or who ordered a mixture of incompatibles calculated to make the bones of Galen and Esculapius rattle in their graves. I beg you to believe that these are no exaggerations.

These conditions are simply a logical outcome of the apathy manifested toward therapeutics by our medical schools, whose officials feel that they have done all that was essential when they have given the average forty or fifty hours of that study. The only argument advanced that could be considered as bearing even a fragment of logic in defense of the attitude, alluded to above, would be the one which suggests that it is not intended that a newly created M.D. should immediately launch out into the active practice of his profession. This of course suggests an ideal condition and one much to be desired. But unfortunately for this argument, there does not seem to be a destiny that shapes our ends and over which we have little if any control.

All medical school graduates are not by fate permitted to enter a hospital; but let us assume for argument's sake that they all do so. What does the intern in the average hospital receive by way of therapeutic training? In most hospitals he receives after a year or two a thorough training in diagnosis and surgery; but of drug therapy unfortunately he receives only a routine conception. This very routine therapy is one of the fallacies of our modern hospital practice, and is to be condemned from the fact that often for financial reasons or for very lack of therapeutic information, a few drugs are made to answer for numerous symptoms, conditions and symptoms complex. This very practice of routine therapy is being bitterly condemned today by certain individuals returning from the great cataclysm, which for obvious reasons, however, we refrain from discussing. In this connection the writer desires to make an exception of our City Hospital in St. Louis.

In the recent epidemic of influenza which invaded St. Louis among other cities, I happened to be in charge of the drug and administrative departments of the emergency open-air hospital which cared for several hundred drafted men from the Marne and Pershing barracks, as also for the overflow which the City Hospital could not accommodate. An agreeable surprise was furnished by the fine quality and plentiful assortment of drugs and other therapeutic agents carried by the hospital druggist and commissary departments that furnished our supplies.

A close study of the conditions which led to the founding of various schools of medicine differing from the regular would undoubtedly disclose the fact that it was on account of the meager offering in therapeutics by the regular schools. This was emphasized by the fact that most of these schools developed as their great-

est asset the study of therapeutics, involving mainly drugs.

In order to illustrate in what esteem therapeutics was held by the medical school of the near past and present, the following incident may serve to shed some light. About nine years ago a very close friend of mine, a physician, was approached by one of the stockholders of a popular medical school in St. Louis with the intention of having him assume the chair of materia medica and therapeutics, four hours a week. It might be stated that the professors of the major chairs were receiving for that time fairly good salaries, if one might be permitted to desecrate a medical professorship with such a prosaic cognomen. This physician on inquiring tactfully as to the remuneration connected with the professorship of therapeutics was met by a surprised stare including the reply that they had never thought of paying a salary for a chair in therapeutics; but that in that particular instance they might make an exception and offer \$10 per month to be increased to \$20 if the course proved popular. This physician managed to struggle through his early years of medicine without the munificent endowment of a therapeutics professor's reward.

The great cry of the present day propaganda of medical schools seems to be for research work. I do not desire to give the impression of being an iconoclast, but I must confess that I am rather skeptic as to the logical relation between time and money expended in the last ten years and actual tangible accomplishments resulting therefrom, in proportion to the actual need for the success of the research. No one doubts the necessity for research, for the need is great, but why not spend at least a small portion of time and money in cultivating a field of knowledge that is an open book, when millions are being spent in chasing elusive phantoms and shadows that are not easily materializing.

It is felt that one could go on indefinitely advancing arguments to show the necessity for action on the present day state of affairs; but in order to bring this paper within the realm of toleration and at least partial good taste, it is essential that it be brought to a conclusion. In view of the conditions outlined above, the remedy of course becomes self-evident. I feel that the regular medical schools must in the first place abandon their insouciant attitude toward therapeutics, which makes of that study a sort of joker in an otherwise perfectly good deck of cards.

There is only one way of familiarizing a mechanic with his tools and that is to teach him their peculiar construction, their individual adaptability and then permit him to handle them in proper usage. To offer a tangible example of our own shortcomings in medical school curriculums, let us conceive for instance of an

automobile school that taught its students the nature and construction of an automobile but simply in a didactic way imparted to the students the method of using the tools while repairing one. The conditions are analagous.

In a logical curriculum of medicine it is a salient necessity that medical faculties be brought to a realization of the fact that it is not only essential that medical students receive didactic instruction in therapeutics, in a cursory manner, of the most widely known few and select drugs, and an exhibition of their action in the pharmacological laboratory, but that they must spend much more time than at present in handling therapeutic agents physically; studying the characteristics of each individual agent singly and in combination, particularly from a therapeutic standpoint; and the embodiment of drugs into a logical and scientific prescription; something which the average graduate confesses he knows little or nothing about. In fact, it might be wise for medical faculties to begin a revision of entrance requirements in order to eliminate therefrom studies which have little or no bearing on medicine, being simply remnants of the feudal and traditional system in education, and insert instead greater requirements in studies like chemistry so that more time may be allotted to the study of therapeutics.

In conclusion: we are living in an age that is essentially materialistic and is becoming more so since the recent cataclysm which engulfed our own beloved land. Each profession is forging ahead by utilizing all available resources for improvement. This cannot be said to have been true of medicine; for while medicine has admittedly made great strides in certain lines, it has done practically little or nothing to eliminate the conditions which have been offered in argument for the thesis of this paper.

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#### SOME FRACTURES OF THE PATELLA AND HOW SHALL WE TREAT THEM\*

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Fractures of the patella in civil life are really injuries to the extensor apparatus of the leg and the result depends largely on the extent, location and treatment of the fascial injury, the perseverance and understanding of the patient, as well as intelligent care on the surgeon's part.

As we well know, the condition is about nine times more frequent in men than in women. I have seen just one woman with a simple transverse fracture. This preponderance can be easily explained when one considers that the

\* Read before the St. Louis Surgical Society, Nov. 19, 1919.



male by occupation is in hazardous positions and frequently exposed to injury, whereas the female is not often so situated. In this connection it is easy to elicit that the fracture was caused by a horse's hoof, by falling on stones, or a similar method. Then too this fracture represents 1.5 per cent. of all fractures and unless carefully treated ankylosis, partial or complete, limited extension, fibrous union, or refracture may occur. Corner<sup>1</sup> states the following:

Fractures in the lower half of the patella are the most frequent, 83 per cent.

Transverse fractures are the most frequent; comminuted fractures come next.

Three males fracture their patella to one female.

Fractures of the right patella are a little more frequent than of the left.

Two underwent operation to everyone which did not.

Fracture of the patella is most frequent between the ages of 30 to 40 years.

The *patella* is the *most frequently refractured bone in the body*.

After operation, 69 per cent. of refractures occur in the first year after the injury.

After treatment other than operation, 86 per cent. of refractures occur after the first year.

The percentage frequent of refractures is approximately the same after operation as it is after nonoperative treatment.

The advantages of operation are solely in the quick and complete recovery of the function of the limb.

The following statistics of refracture of the patella, embracing fifty-five cases, is interesting: Frequency of refracture, 11 per cent.; after suture, 10 per cent.; after other treatment, 9 per cent.; after suture refractures within the first year were 69 per cent.; after other treatment, 14 per cent.; after the first year, 31 per cent.; after other treatment, 86 per cent.; after the first three years, 12 per cent.; within the first three years, 88 per cent.

Refracture occurring through the same place as the former fracture 95 per cent. Otherwise the fracture is above the line of the original fracture. From the surgical viewpoint one may classify fractures of the patella into two kinds: (1) Transverse, and (2) vertical, irregular or comminuted.

The transverse type is usually the result of muscular action in an effort to prevent falling. With the knee at an angle of 60 to 90 degrees and the ligamentum patellae taut and drawn tightly against the femoral condyles, the pull of the quadriceps is suddenly exerted with full force at its insertion into the top of the patella fracturing the patella and tearing the lateral expansion of the quadriceps tendon.

The line of this fracture is regular and almost exactly transverse with tags of torn periosteum, fascia and blood-clot between the fragments. In most cases the dense fascia covering the patella is torn, along with part of the capsule, the reinforcing tendinous fibers of the vastus internus, and the prolongation of the fascia lata on the outer side, thereby partially or completely destroying the reserve extensor apparatus.

*Treatment.*—First aid calls for immobilization of the extended limb, the application of a firm bandage so as to limit the hemorrhage and resultant synovitis, after which an ice-cap may be applied.

Treatment proper, consists in reducing and retaining the fragments in perfect apposition, promoting absorption of the synovitis resulting as well as restoring the function of the limb.



Fig. 1.—Ununited fracture of upper tip — always operative. Note how fragment dips backward and gouged patient. Size of fragment much smaller than radiogram indicates. Suture with normal functional result.

There are two methods by which this may be achieved:

(a) Conservative treatment, by means of a Cabot posterior wire splint reaching to the hip after the fragments have been carefully approximated and held secure by a few adhesive strips, is quite popular, replacing the splint with a light split plaster cast after agglutination has become secure.

(b) Operative treatment is the usual procedure when the patient is in an efficient hospital, and consists in exposing the line of fracture by means of instrumental technic, usually through a U-shaped incision, and uniting the fragments with absorbable sutures of catgut or kangaroo tendon. A suture which encircles the patella often secures excellent approximation, especially when combined with one or two inter-

1. Corner, E. M.: Ann. Surg., 1910, p. 707.

rupted sutures through the fragments but is apt to invert the edges and buckle the fragments. Repair of the lateral tear followed by skin closure completes the operation.

Accurate adaptation is almost impossible of attainment in transverse fractures of the patella and bony union is not the rule by means other than open operation.

My personal experience and observations of the work of other surgeons and cases, convince me that when one of these fractures requires operation the sooner this is practiced the easier it is to do; the fragments can then be accurately adapted and fitted together, fascial tags removed and better final results obtained.

Operation should be possible within three days after the injury and thus one avoids fibrin deposits.

Extra hard catgut serves well for the interrupted sutures uniting the bone, or medium kangaroo tendon may be used.

Wire is to be condemned, if for no other reasons than its treacherous nature, that it is nonabsorbable, that it frequently gives way at the twist, that it acts as a foreign body, and exercises a directly destructive influence on the bone.

For many years the tendency has been to flush the knee-joint with normal saline to remove the blood clots and fluid.

My own preference has been to sponge out the joint gently with cotton wrung out of warm normal saline solution. This procedure can be easily carried out instrumentally and does not abrade the joint surfaces. Occasionally flexing the knee facilitates the removal of any serum by means of the sponge on a forcep.

The skin closure can be beautifully made by black, interrupted silkworm gut sutures, which may be removed on the eighth or tenth day after which a light fiber-board splint, molded to the limb so as to permit of easy inspection and further treatment, should be applied and the patient allowed to be on crutches, and steps looking to the removal of the synovitis begun.

If the synovitis has been entirely absorbed—usually it does in two weeks following operation—then one can begin active motion very gradually.

The application of high degrees of dry heat (240 to 260 F.) for one hour two or three times a week removes the swelling and tenderness, loosens up the joint, and greatly aids in the easy and early restoration of function. Usually six bakings suffice.

Gentle active motion, cold water douches, drugs and salines all have their place in the post-operative care. Massage and rubs go far toward allaying the patient's fears and passive motion is being gradually abandoned on account of the pain and the fact that other means less painful are at our call. Early and gentle active motion, when combined with "bakings," limit

the infiltration of the periarticular tissues with exudate. However, one should not forget that the gradually increased application of weight and use of the limb aid greatly in the effect.

In a certain number of cases there is a tendency to partial ankylosis, due to an osteoarthritic tendency and to a slowly absorbing synovitis, which in turn often is hemorrhagic in nature.

I regard the postoperative care as one of the chief aids in securing and *maintaining* a perfect result.

*Verticle type.*—In this class of cases due to direct trauma there is usually little or no separation of the fragments. They do well under immobilization—plaster Paris splint or Cabot—if continued for five or six weeks.

In compound fractures the Cabot splint is very convenient and permits of easy inspection and dressing. However, in case of joint infection the Hodgen splint will immobilize and facilitate dressing as well as permitting of easy wound inspection.

I regard most compound fractures of the patella (in civil life) as clean cases unless infection is evident, and wait and observe until it is manifest. It is hardly necessary to recall that the wound in the soft tissues is usually placed some distance from the fracture site. When once converted into a simple closed fracture the compound type may be treated operatively unless there is considerable comminution.

In a recent ununited fracture of the upper tip of the patella—and this fracture is always operative and should never be treated conservatively—I found a small upper fragment, rather soft and inverted so as to dig the patient at every opportunity. There was no appreciable scar laterally and the dense fascia was intact over the fracture site. Division of the facial scar revealed the above mentioned condition, with a mass of scar tissue covering the upper end of the lower fragment. This scar tissue was easily and readily removed with a scalpel and a bleeding surface was left. The upper fragment was curetted, and excellent approximation by sutures obtained. Probably a smaller fragment could have been removed but my respect for the knee-joint did not warrant the procedure. In ununited fractures one should always inspect carefully to see that there are no adhesions restricting the free movements of the fragments.

Nonunion is more apt to occur the higher the line of fracture since there is quite a good pad of muscle fibers and fascia over the upper half and few below and some of them are prone to get between the fragments. Then, too, in fracture of the upper tip the fragment dips downward and gouges into the joint (Fig. 1) thereby preventing any approximation of the two broken surfaces.

I have seen one case where the tendon was jerked loose from the upper tip of the patella



in an elderly woman, and in which surprise was a factor, and one other case (Fig. 1) where the upper tip was broken by direct violence, a kick of a horse.

Nonunion is best treated by sutures — if within three or four months—after removing the scar tissue from the lower fragment and “touching up” the margins of the fragments with the circular saw till they exude serum or bleed. A tiny piece of bone might be removed, although I would be reluctant to do so.

The inlay bone graft should be reserved for cases of long standing nonunion, for easily accessible cases of refracture, or in cases with a yielding fibrous union. The bone should be removed *en bloc* and then fashioned to an I shape, and securely fixed with absorbable sutures.

The bone graft should not be recommended for fresh simple fractures.

Summarizing, one can state that suprapatellar laceration of the extensor tendon requires accurate suture to prevent interference with extension; that all fractures of the upper third demand operation because bony union can be obtained in no other way and nonunion or fibrous union at best, along with limited use results, if treated otherwise.

Simple transverse fractures, without much injury to the facial aponeurosis as shown by good leg extension, may be treated conservatively when not in an efficient hospital.

Refracture occurs relatively often, almost always in the callus and in accessible locations, should be treated by the inlay bone graft, and most careful postoperative care. I have seen one case of refracture occurring in an effort to break up adhesions too long neglected, under an anesthetic. This case impressed on me the importance of keeping the patella mobile and preventing it from becoming united by adhesions to the femur.

I have seen just one case of ununited fracture of the patella in which there was considerable separation of the fragments without any semblance of fibrous tissue interposed.

As so many factors enter into the results I have refrained from a table of statistics.

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#### CONSERVATIVE SURGERY OF THE PELVIC ORGANS\*

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The progress of the present day surgery is largely due to the recognition of one's mistakes as well as those of others in diagnosis and technic and avoiding their repetition. As the basis of this paper, I have studied 150 cases operated

on in the last five years in my own practice, and at the Kansas City General Hospital under the service of Dr. Howard Hill, also 1,750 cases collected from the latest literature and reports of such men as Dudley, Chipman, Polak, Hibbitt, Humison, Taylor, Morrison, Hill, Crossen, Lockhardt and Palmer.

It seems to me that the treatment of acute tubal infections has become quite well standardized; that is, rest in bed for a couple of weeks, local applications of heat and cold, and one of two things happens, a resolution and apparent cure of infection or the formation of abscess. The suppurative salpingitis is a condition that has to do with a large amount of pelvic surgery of today. The kind of infection has much to do with the treatment. In mixed infections following childbirth and abortions there is less tendency to resolve themselves. In this class



Fig. 1.—Normal anatomy and blood supply as usually found to the uterus, ovary, tube and vagina.

of cases if abscess is low down it is safer to make a vaginal puncture and drain, then do the radical operation later, if necessary. In the subacute and chronic cases of pyosalpinx due to the Neisser infections where we have many dense adhesions, the operation of choice it seems to me is to make midline incision, locate the uterus (do not puncture the uterus with a pair of tenaculum forceps because you will get a persistent oozing that is annoying and shows your work), take a pair of smooth forceps and grasp the round ligament as your means of support, then by gonig down behind the broad ligament one can follow the line of cleavage and dissect out the tubo abscess quickly and easily without much danger of damaging the intestine. A good thing to remember is that the right side should always be resected first as the left tubo-ovarian abscess usually rests on the sigmoid and one learns to have a great deal of respect for it because it is so easy to puncture the bowel

\* Read at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.

at this angle. On first inspection when the pus tube and ovary are brought into view, we find the ovary covered with a pseudomembrane and many times it seems that we will have to sacrifice it, but by careful dissection with a piece of gauze one is able to free the ovary from its nest of adhesions and have plenty of room in the mesentery of the ovary for forceps and ligatures for the resection of the tube, being careful not to cut off the blood supply to the ovary with your ligature. A technic that I have been using is to place a short pair of curved forceps across the corner of the uterus and catch the distal end of the mesentery with a large pair of forceps; then with a madras suture, I ligate the only vessel left supplying the middle of the tube; with this tied I remove the tube, not an inch from the uterus but including a part of the

ment), reports results as to postoperative symptoms very bad, and a mortality of 6 per cent. following hysterectomies. Loss of the ovaries in young women means the loss of sexual influence to the individual with all the disturbance in general metabolism which the loss signifies. The earlier in life the greater the calamity.

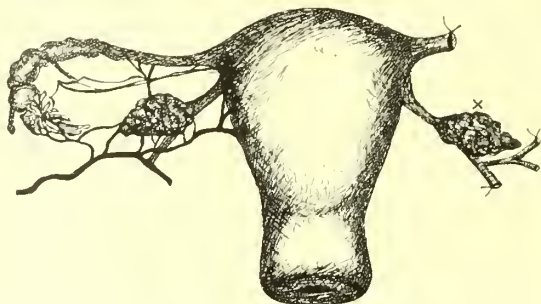


Fig. 3.—The resected fallopian tube not at cornu of uterus but a half inch away. Ovary prolapsed and its blood supply destroyed.

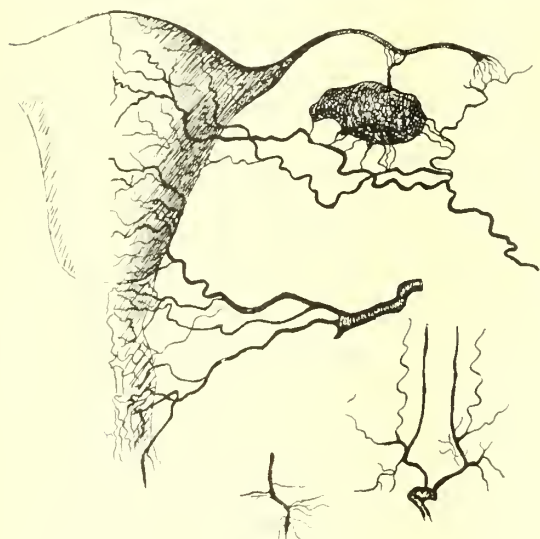


Fig. 2.—Normal anatomy with some variations in blood supply, especially to fimbriated end of tube and posterior vaginal wall.

In removing pyosalpinx, as John Osborne Polak has wisely said, the technic of the operation and the general condition of the patient has much to do with the end results. In chronic pyosalpinx where the pelvic anatomy is much distorted by inflammatory changes and the blood supply to the ovary is liable to be included in the ligature if one is not well acquainted with pelvic anatomy.

Edwards of Boston says, "It seems to me one should, however, make a distinction of a part of the diseased tube and a similar conservation of the ovary. The two are of very different value."

Another malady, the prolapsed ovary, is a common condition and one that gives the surgeon much mental unrest. This condition oc-

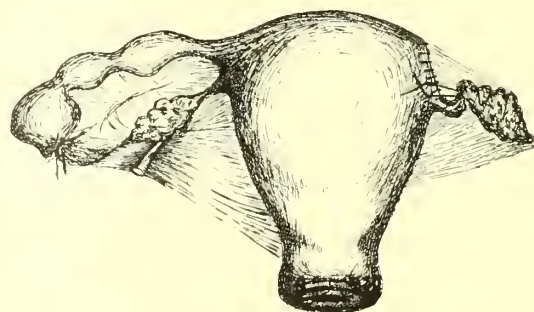


Fig. 4.—Fallopian tube resected, including a part of cornu of uterus; ovary suspended and held near normal position by shortening ovarian ligament.

cornu of the uterus; then with an over and over stitch I close the gap in the broad ligament. This technic turns the raw edges inward and at the same time controls the hemorrhage, and by anchoring the ovary to cornu of the uterus places the ovary nearest its normal position with the least possible chance of pinching its blood supply. The method is simple and efficient. In the cases in which we have done this in the past five years there were few if any in which we could not save a whole or a part of the ovary. I believe these were a fair sample of neglected cases. Postoperative symptoms have been very pleasing as far as we have been able to ascertain. In the above described cases some good men do a radical operation, that is, a complete hysterectomy and interpret it as conservative.

W. W. Chipman, in his recent article with a study of 1,500 cases (after the radical treat-

curs most often on the left side and there is an anatomical reason for it. The right ovarian vein empties obliquely into the ascending vena cava, while the left has its outlet at right angles to the renal veins; therefore, we have more obstructions to circulation and many structural lesions.



The prolapsed ovary is secondary to some other trouble and may be swollen, tender and cystic (patients complaining of backache, pelvic weight, nervousness and headaches). One does an abdominal section by means of a lateral or vertical incision; the ovary is located in the bottom of Douglas' fossa; it is lifted out; on examination is found to be large and cystic. Shall we resect the ovary, sew it up carefully with No. 1 catgut, being careful to turn the raw edges inward, and replace it in the pelvic cavity and then expect results? No experience of the best surgeons has proved that the real surgical judgment comes into play at this stage of the operation. If secondary to a uterus that is retroverted and bound down with adhesions, one must break up adhesions, bring uterus to its normal position and anchor it; then we must place the ovary near its normal position beside the uterus and anchor it in such a way that the efferent blood supply will not be disturbed. Another and perhaps a better way is to expose the broad ligament, puncture it between the vessels, bring the ovary through the hole in broad ligament and with a couple of stitches it is held in place; this gives it protection from the surrounding viscera. The failure of supporting the ovary is a mistake that has been made by many good surgeons and is responsible for the unsatisfactory post-operative results. In these cases where they are complicated with a relaxed perineum it must be restored, and I think the Hill operation is ideal for the perineum. Again, some good surgeons do a radical operation in these cases, remove the ovaries or perhaps do a hysterectomy and call it conservative. We know, where a whole or a part of an ovary is left, the function of internal secretions or the trophetic influence of the ovary is maintained.

William H. Humison of Cleveland, in a report of 132 cases of resection or removal of one ovary, had only three cases return for the second operation, and to his knowledge sixteen of these cases gave birth to children.

Lee of Indianapolis has shown that when one ovary is removed the other takes on a compensatory hypertrophy. It is also a fact that where there is a diseased ovary, the uterus and other ovary undeveloped, by removing the pathology the uterus and good ovary will become fully developed.

Robert Dickinson of Brooklyn, in a recent article on conservation of the ovary, reports 75 per cent. of the young women, following hysterectomy for fibroid tumors, where the ovaries are left free from surgical menopause. It should be remembered that the uterus has no physiological value without the ovaries and that the ovaries do not lose their value when the uterus is removed.

Careful study of post-operative cases where

radical operations have been performed are many times more distressing to the patient than their original trouble. One only has to study the statistics to find the unwarranted after-effects of a bilateral oophorectomy in young women, a premature menopause, mental depression, sexual instinct abolished in 16 per cent. of cases. Giles, in reviewing the results of a thousand cases in which 50 per cent. were bilateral oophorectomies, condemns the radical operation.

Sherwood Dunn in 100 cases where bilateral oophorectomy was performed in 78 per cent. there was a noticeable loss of memory; 60 per cent. became more irritable with violent fits of temper; 42 per cent. mental depression, 10 per cent. being depressed to verge of melancholia, 10 per cent. were not relieved of their pain and other symptoms, 35 per cent. had increase in weight, some became very fat and indisposed, 12 per cent. changed in voice and masculine qualities developed.

#### CONCLUSIONS

1. Do not operate acute pyosalpingitis.
2. Be sure and resect all the diseased fallopian tubes.
3. Conserve the ovaries in young women when doing a hysterectomy for fibroid tumors.
4. One should not remove all of both ovaries except in malignancy and bilateral abscess.
5. In cases of prolapsed ovaries be sure and anchor ovary near normal position and suspend the uterus.
6. Always repair pelvic floor.

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#### IS PSORIASIS INCORRIGIBLE?

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The idea of the incorrigibility and foreordained recurrence of psoriasis seems to have become so firmly fixed in the minds of those who treat it that a rather resigned and supine attitude has become the fashion in all dealings with the disease.

I have recently heard it stated that the absolute futility of treatment has been conclusively demonstrated. That one man has stricken meat from his patient's diet, another beans, still another carrots, coffee, cigars, or what not, and has joyously proclaimed a cure only to be confounded by a recurrence in a few months. This levity in the face of the fact that 4 per cent., or one out of every twenty-five patients, presenting themselves to dermatologists for treatment is a psoriatic.

Public discussion and criticism of the subject is rarely instructive or informative. Truly

enough, differential diagnosis with minute attention to infinitesimal detail of lesion, is usually admirably threshed out. But what of treatment?

The all prevailing idea of the recent laboratory epoch is to find a definite cause for every pathological entity. We are taught, and very truly, that if we know the exact etiological factor for a given morbid condition we can perhaps cure it in almost every case.

But, on the other hand, what happened in the dark days of medicine in regard to malaria, syphilis, smallpox and the like? These conditions were successfully combated, although no man knew the source from which they sprang.

In therapeutics we often adopt measures merely because we know by experience that they succeed. An explanation of the *modus operandi* comes later, and the correct explanation much later still.

Before going further it might be of interest to mention briefly a few of the multitudinous theories deduced by zealous explorers in this *terra incognita*.

Psoriasis has been traced back to a rheumatic, gouty or uric acid diathesis; to lesions of the central nervous system following either inherited or acquired syphilis; to syphilis itself, and to over or under secretion of one or the other of the ductless glands.

At one time the idea that psoriasis is infectious was most prevalent and produced the epidermosporon theory of Lang and the lecopolla repens belief of Eklund.

Another group of workers isolated a body resembling the prickle cell of the epidermis. Its constant association with typical lesions could not be proved.

The almost universal use of local parasitocides, such as chrysarobin, pyrogallol, strong mercurial ointments, and the roentgen ray, show how prevalent is this theory.

Ninety-nine times out of 100 the general practitioner, confronted by a case of psoriasis, will prescribe chrysarobin ointment—usually of too high a percentage—and Fowler's solution. Having shot this bolt, he finds his quiver already empty, and surrenders the case to a dermatologist, who goes on with the treatment, or substitutes some bizarre and outre pet method of his own.

In this article it is my intention to outline a method of treatment based largely on satisfactory personal experience. It follows, however, in direct sequence on the two most widely accepted theories as to the causative factors underlying this condition.

The first of these is nitrogen retention, arising from whatsoever cause. Beyond a doubt there is some profound alteration in nitrogen metabolism in psoriatics. Secondly, it is often termed a neurosis. Such an assertion is of little value, however. What gives rise to a condition

of atonicity, erethism, and lost vasomotor control? We of course find an immediate answer in our first assumption.

Following this belief, our routine of treatment naturally falls into well defined channels. These are, in the order of their importance:

Internal treatment.

Diet.

External or local measures.

#### INTERNAL OR SYSTEMIC TREATMENT

Among the internal medicaments, those of first importance seem to be: arsenic, iron, nuxvomica, the potassium salts, vegetable tonics, iodids, mercury, suprarenal, thyroid and pituitary extracts, and vaccines.

Here we have arsenic as usual heading the list. From the very beginning this drug has been the standby, the *vade mecum*, of the skin practitioner. Since student days we have all been familiar with the fascinating tale of the beautiful skins, ravishing complexions, and fine and glossy hair of those arsenic eaters of Central Europe. For years it has been used empirically. Up to a short time ago we had no idea of even the channels through which it operated. Now we are reasonably sure that activated suprarenals, or a stimulated thyroid, bring about the much desired results.

The use of iron has waned greatly in recent years, following the very modern nihilistic tendency toward drugs in general. This is to be deplored. In those cases which call for it nothing can be substituted satisfactorily.

With nuxvomica the same is true. Recent investigations have shown that the tonic and stimulating properties of this drug are due to the increase of suprarenalin in the blood stream, which its ingestion encourages. It is interesting to note how closely its physiological action parallels that of the aforementioned glandular extract. It stimulates the motor nerve cells of the spinal cord, the cardiac motor ganglia, the respiratory and vasomotor centers in the medulla, contracting the arterioles all over the body. The result is that respiration is deepened and quickened, the action of the heart is increased, and the blood pressure raised, thus increasing oxidation and elimination. Here we have a drug of great worth and potency, fully on a par with arsenic in its application to the treatment not only of psoriasis but of other dermatoses as well. Its more general use in full doses in such conditions is surely indicated.

The potassium salts, the acetate—bicarbonate and citrate—are useful in reestablishing the mineral balance of the organism. In almost every case we have to combat the nitrogen retention and suboxidation arising from suprarenal insufficiency, hypothyroidism or whatnot. Suboxidation means toxemia; toxemia means acidemia, with consequent alkaline neutralization or demineralization.



Potassium iodid and mercury have been administered in psoriasis with the idea that this disease and syphilis are related. Long ago it was thought that psoriasis was due to an attenuated syphilitic virus. Histologically the skin lesions of these two diseases are entirely dissimilar. It was also suggested that nerve lesions produced by syphilis were responsible for the other eruption.

It is reasonable to suppose, however, that the tonic and alterative properties of mercury and the absorptive and eliminative action of the iodids are exerted without any true specificity.

In suprarenal and thyroid extracts, alone or combined with the products of the other endocrine glands, we have remedies which in the near future will without doubt head the list in point of efficacy. It remains only for the physiological chemist to isolate the definite chemical compounds composing the glandular substances. When this is accomplished our therapy will be concise and accurate. We already have a thyroid extract from which the vasomotor element has been removed, thus eliminating the factor which gives rise to the disagreeable symptoms of over dosage in that direction. The brilliant results from its use in skin conditions arising from hypothyroidism are highly encouraging. In the meanwhile, however, we may use the drugs already mentioned with equally pleasing results.

There remain the vaccines. In the absence of any microbic element we are perforce restricted to the use of the nonspecific proteins. In pathologic conditions depending on disturbed metabolism, to which class we have assigned psoriasis, we are led to believe that there exist in the host foreign protein molecules of different specific gravity from the system.

Our vaccines containing antiferments cause the destruction of these foreign elements and at the same time stimulate the blood forming organs to greater activity in the production of white and red blood cells.

There have been a number of good results from this treatment in psoriasis, both from "homemade" and stock vaccines. There have been also some rather prompt relapses or recurrences. I regard the use of these substances as merely supplementary to the general systemic treatment. They might be classed with the agents used locally, which we employ temporarily for the prompt relief from unsightly lesions.

#### DIET

A vast controversy has raged about the question of diet. As has been stated earlier in this article, much criticism and ridicule has fallen on the heads of those who have abstracted this, that or the other from the dietary in order to cure psoriasis. Patients have been restricted and denied and deprived, in some instances almost to inanition. To my mind the crux of

the matter is this: Has our patient proper digestion, absorption, assimilation, secretion? If not, would not it be far more rational to endeavor to aid where nature is lacking in these processes, rather than to direct the sufferer to abstain from articles of food entirely innocuous to ninety-nine out of every 100 normal individuals?

With innumerable curative agents at our disposal the task of adjusting the organism to cope with these otherwise nonassimilable products should not be an impossible one. However, while this change is being brought about, restriction of diet will aid us tremendously in clearing up those lesions which are usually present when the patient presents himself.

I have never yet seen a case in which the exclusion of meat from the diet did not bring about an amelioration of symptoms to a greater or less degree, this improvement being in direct ratio to the severity of the outbreak or to the amount of meat usually consumed.

It is distinct folly to assert that complete abstinence from meat is a severe obstacle to perfect wellbeing in a large majority of individuals. Consider the great number of our population who are vegetarians from choice; also the vastly greater number who prefer a vegetable diet but are denied it on account of prevailing conditions, especially during the winter season. The former seem to need no handicap in the game of life from the meat eaters, and the latter will tell you of increased vitality in summer when the restriction on fresh vegetables is lifted.

It is necessary only to balance the diet by increasing the amount ingested of those foods we find to be the least harmful.

#### EXTERNAL TREATMENT

Finally, in regard to external treatment. To say that the less we do in this regard the better surely smacks of heresy. And yet experience bears us out in our lack of faith.

The old stimulant, antiparasitic and destructive agents are surely in the discard. As well think of curing a blighted peach tree by laboriously picking off the gum which exudes through the bark. The psoriatic lesion is continuously pushing to the surface as a manifestation of the pathological brew bubbling constantly beneath. The more irritant our application, the more severe the resultant reaction. But again, as in the employment of diet, we may use certain agents temporarily.

The rays of the Alpine sun lamp, judiciously applied, will at times yield excellent results. It is of especial value on the scalp, where ointments and the like are difficult and distasteful to use.

Mild application of the roentgen ray can be used on the nonhairy surfaces. As a rule, however, resorcin in a lotion to the scalp, and a mild ointment of ammoniated mercury elsewhere, are

all that will be required. Local applications might be done away with entirely, were it not for the seborrhea which often has to be combated, especially on the face, the parasitic element complicating the scalp lesions, and the frequent need of demulcent dressings where the surfaces are dry, fissured and excoriated, or when there is much itching.

It has been said that genius is an infinite capacity for taking pains. In the treatment of psoriasis we must approach genius. There is no royal road to its cure; no specific. Therefore it is only by constant care and supervision, diligent plodding, and infinite attention to detail, that we may hope to achieve the goal.

The mere fact that the patient clears up under treatment and then relapses months hence is no indication that our methods are faulty. It simply means that some retrograde action has taken place in metabolism which could have very probably been prevented had the patient been under proper supervision. Do we give our tuberculosis cases or our syphilitic ones a single course of treatment and then dismiss them? We certainly do not.

I append the following case history as a single illustration of what must be done, in laborious detail, to combat and control an ordinary case:

An acute, moderately severe psoriasis, in a girl of 18, of ten weeks duration. Patient is otherwise *apparently* in good health; although slightly under weight and constipated. Is employed daily from 8 to 5. Urine shows increased acidity and some phosphates.

First visit. Vegetable diet.

#### No. 1.

R Ferri and ammon. cit. ....dr. ii  
Liq. potass. arsenitis. ....dr. iv  
Liq. potass. ....oz. i  
Tr. nucis vom. ....oz. i  
Tr. gentian. ....oz. ii  
Aqua .....ad oz. vi

Sig.: Dr. i in aqua p. c.

#### No. 2.

R Mass. hydrarg. ....  
Ext. Colocynth Co. ....ãã gr. x  
Pulv. ipecac. ....gr. ii  
M. et div. caps. No. iv. ....

Sig.: Two at night and two second night after.

#### No. 3.

R Resorcin .....dr. ii  
Spt. vini rect. ....dr. iii  
Glycerin .....dr. iv  
Aq. rosa. ....ad. oz. iv

Sig.: To scalp morning and night.

#### No. 4.

R Ac. carbolic .....dr. ss  
Pulv. calamin. ....dr. i  
Zinc oxid .....dr. ii  
Glycerin .....dr. iii  
Liq. calcis .....dr. iv  
Aq. rosa. ....ad. oz. iv

Sig.: Apply freely to more inflamed lesions.

Second visit.—Continue vegetable diet; continue iron tonic; repeat capsules; continue resorcin tonic; continue calamin lotion.

#### No. 5.

R Ac. carbolic. ....gr. xx  
Menthol .....gr. xxx  
Lanolin .....oz. i  
Boroglycerin .....dr. iv  
Ung. aq. rosa. ....ad. oz. iv

Sig.: Apply to body for excessive itching.

#### No. 6.

R Sapo viridis .....oz. ii  
Spt. vini rect. ....oz. i

Sig.: Shampoo.

#### No. 7.

R Tabs. Cascarin Co. (Fraser).

Sig.: For constipation as required.

Third visit.—Continue vegetable diet with the evening meal to consist of nothing but bread, butter, rice and water. Continue iron tonic; continue both lotions; discontinue capsules. Continue ointment of last visit, without the menthol, and with ac. carbolic, gr. xxx to oz. iv.

Fourth visit.—Diet the same; stop iron tonic; stop lotion calamin; continue lotion resorcin to scalp; continue ointment to body.

#### No. 8.

R Potass. acetat. ....dr. iv  
Pulv. rhei. ....dr. i  
Pulv. ipecac. ....gr. x  
Soda bicarb. ....dr. iv  
Aq. menth. pip. ....ad. oz. iv

Sig.: Dr. i in aqua p. c.

#### No. 9.

R Tabs. peptenzyme.

Sig.: Three or four p. r. n.

#### No. 10.

R Ac. carbolic .....gr. v  
Ung. hydrarg. ammon. ....dr. ii  
Ung. aq. rosa. ....ad. oz. i

Sig.: To lesions on face.

Fifth visit.—Continue as last time, with iron tonic at noon and R. and S. morning and night.

Sixth visit.—Diet same; stop iron tonic; stop Mst. R. and S.; stop lotion resorcin.

#### No. 11.

R Potass. acetat. ....oz. iss  
Tr. nucis vom. ....oz. i  
Fl. ex. dulcamara. ....oz. ii  
Fl. ex. rumicis rad. ....ad. oz. vi

Sig.: Dr. i in aqua half hour ac.

#### No. 12.

R Ac. salicylic .....dr. i  
Tr. cantharides .....dr. vi  
Tr. capsicum .....oz. i  
Ol. ricini. ....dr. iii  
Ol. bergamot. ....dr. ss  
Spt. vini rect. ....ad. oz. iv

Sig.: to scalp b. d. Add calomel gr. xx to ointment for face.

Seventh visit.—Discontinue internal mixture and give in place:

#### No. 13.

R Potass. acetat. ....oz. ii  
Tr. nucis vom. ....oz. i  
Inf. quassia. ....ad. vi

Sig.: Dr. i in aqua p. c.

Continue rest of treatment.

Eighth visit.—Same as before, except internal mixture changed to:



## No. 14.

R Ferri and ammon. cit. ....dr. ii  
 Liq. potass. arsenitis. ....dr. iv  
 Liq. potass. ....oz. iss  
 Vini ferri dulcis. ....ad. oz. vi

Sig.: Dr. i in aqua p. c.

Add Tr. cantharides oz. i to scalp lotion.

Ninth visit.—Continue as before and add Tr. nucis vom oz. i to internal mixture.

## No. 15.

R Ac. salicylic. ....dr. i  
 Spt. vini rect. ....oz. i  
 Glycerin ....dr. ii  
 Aq. rosa ....ad. oz. iv

Sig.: Rub well into palms.

## No. 16.

R Liq. formaldehyd. ....dr. iv  
 Glycerin ....dr. iv  
 Aq. rosa ....ad. oz. iv

Sig.: For itching in axillae. Dilute by half if necessary.

Tenth visit.—Continue diet. Use lotions and ointments when necessary. Stop internal mixture and take R No. 1 morning and night.

At the conclusion of these ten visits, the patient was entirely free from any *skin* manifestation of the disease with the exception of staining on the lower legs. Improvement began from the very first. After the fifth or sixth visit, very few lesions were left, none being troublesome. She had gained 3 pounds. The diet towards the last was not strict, meat being taken every day or two, and the evening meal of rice optional.

Since the last regular visit—over a period of fifteen months—only once or twice have very small lesions begun to make their appearance. The patient can herself usually trace their origin to some physical vicissitude, or gross error in diet. Two or three days of the old strict régime is all that is required to efface them.

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# THE RELATION OF ANAPHYLAXIS TO ASTHMA AND ECZEMA\*

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It is not my intention to introduce much that is new but rather to summarize the knowledge at hand and to emphasize its significance and the ease with which the simple tests may be applied to our clinical cases.

We are all fairly familiar with the theories of anaphylaxis. But simple as their practical application is, and brilliant as are the results we so often get by their use, few are taking advantage of this knowledge in their every day work. From inquiry it seems that many still have hazy ideas as to the simple technic required in this work. So I will deal in some detail with this phase of the subject.

It is obviously in children that we most frequently find these disturbances, and here also where we may hope for our earliest and best results. I have therefore chosen the two most common disorders of this type that I find in my work. The technic is similar in all of the allied manifestations and any one sufficiently interested can easily adapt it to the work at hand. It will perhaps not be amiss to review a little of the literature on the subject by way of ground work.

It is a very old piece of knowledge that certain foods, such as strawberries, lobsters, some shell fish, etc., can be eaten without untoward results by most of us, but not only cannot be tolerated by some, but if ingested by them may produce most distressing symptoms, as urticaria, vomiting, diarrhea, edema of the glottis and lungs, and rarely even coma and death due to anaphylactic shock.

Such food allergies have long been observed but it remained for a few men with a keener observation and diligence to grasp the significance of the thing, to solve the riddle, and produce the experimental proof. The earliest work done abroad was for the most part unsatisfactory and often misleading. In this country Theobald Smith then at Harvard was the first to draw attention to and advance a theory on anaphylaxis. Since that time much has been added to our knowledge of the condition.

In 1913, about four years later, Vaughan put forth his reasonable theory which still forms a good working basis so I quote him directly: "When a foreign protein is introduced into the blood or tissues it stimulates certain body cells to elaborate that specific ferment which will digest that specific protein. When this protein first comes in contact with the body cells, the latter are unprepared to digest the former, but this function is gradually acquired. The protein contained in the first injection is slowly digested, and no ill effects are observable. When subsequent injections of the same protein are made, the cells prepared by the first injection pour out the specific ferment more promptly, and the results are determined by the rapidity with which the digestion takes place. The poisonous group in the molecule may be set free so rapidly, and in amounts sufficient to produce symptoms, or to kill the animal."

For the most part this remains unrefuted to date. Anaphylaxis so far as our present knowledge carries us is always due to the protein element in the food, and the allergy may exist to one, or to a group of proteins in a given individual.

For sensitization the protein must enter the tissues before it is entirely split. When this happens sensitization results, unless successive doses are given in small enough amount at short enough intervals and over a long enough period to produce immunity.

\*Read before the Kansas City Academy of Medicine, May, 1917.

The logical place for the proteins to enter the tissues in the unsplit state is through the mucous membrane of course unless they are given artificially, hypodermically, as diphtheria antitoxin, or otherwise.

Lust, in 1913, and Schloss more clearly in the past year, have shown that the intestinal mucous membrane of the infant is normally permeable to unchanged (e. g., unsplit) protein, and that if the continuity of the mucous membrane is disturbed by an infectious diarrhea or otherwise it is rendered far more permeable.

H. L. Smith, in 1910, reported a case of a man sensitive to buckwheat. When 9 years old he ate a part of a buckwheat cake and developed a tremendous urticari, angioneurotic edema and vomiting. Any time later that he smelled or was even near buckwheat in any form, though unconscious of it at the time, this phenomenon repeated itself.

In 1912, O. M. Schloss came forth with some brilliant work in this connection on animals, and several children with asthma, in which the disturbance was directly attributable to an allergy to some food protein. In one child with a severe case of asthma he obtained a reaction to egg albumen and immunized the child by giving small, gradually increasing doses of ovomucoid, three times daily. He completed the immunization in two and a half months when a permanent cure resulted.

Fritz B. Talbot reported a series of similar cases in 1914, due to egg albumen, and in the last year another group of cases with an idiosyncrasy to cow's milk.

Other work of interest in the last year is that of Blackfan, who reported a group of eczema due to various food allergies. He was, however, not always successful in immunization. The Harvey Lecture delivered by Dr. Longcoopf of New York on the work of himself and Racheman is well worth one's while. Also the work of Wharten and Schloss, Strickler, and that of Baker and Floyd, on the reaction of bacterial proteins is of interest.

It has been my fortune to have the opportunity to follow quite a number of cases of eczema, chronic bronchitis, and asthma, in infants and children. From the evidence in the literature and my own experience I feel that much of the chronic bronchitis in children is asthmatic in type. That the etiology of asthma in children under the age of 12 years is usually separate from and different than in adults. I know that many at least of these cases are directly due to a food allergy because when the specific protein in a given case has been detected and the child has been immunized to it the symptoms have disappeared permanently.

I know that a great many eczemas, and I feel that most eczemas in infants and children, are due to an allergy to one or more food proteins. And the reason that so many cases remain un-

proven is merely because we lack the shrewdness required to locate the trouble.

When these disorders are due to a food allergy they are not permanently amenable to other forms of treatment than immunization, and will continue either constantly or intermittently until immunization is produced either artificially or automatically.

Now, in a given case, where we suspect an allergy to some food, how are we to determine which is the offending protein?

It is my custom in all eczematous or asthmatic conditions, for I feel that asthma and eczema in infants and children are not diseases but manifestations, or symptoms of a common disorder which may appear simultaneously or one subsequent to the other in the same individual, to take a most careful family and personal history of asthma, eczema, or known food idiosyncrasy. In this way I am sometimes able to limit my field materially.

My next step is a differential blood count. In a paper recently published I brought out the fact that in a measure the eosinophile cells vary in percentage with the degree of sensitization. This seems to vary in a definite cycle, peculiar to the individual, but approximating nine to fourteen days for completion. Also by repeated counts I am able roughly to determine the degree of immunization I am effecting by treatment. When asthmatic I like a roentgen-ray of the chest to show the conditions of the bronchial glands and to bring out any bronchiectatic area that might be present.

My next step is to detect the offending protein. For this purpose the isolated proteins serve best, but the determination can be satisfactorily made by using the whole protein of a food (e. g., whole egg white instead of ovomucoid, etc.).

These tests may be performed by:

1. The cutaneous method: This method is most valuable in a very sensitive subject, and is best performed on the flexor surface of the forearm. The skin is thoroughly cleaned with alcohol or ether. A small amount of protein is rubbed into a limited area of the skin, a control being performed without the use of any protein. If positive the reaction asserts itself in from four to twenty minutes in the form of an urticarial wheal. The edges of this area are irregular, probably due to the edema spreading along the lymph channels of the skin. The whole phenomenon disappears in from one to two hours.

2. The method that I most commonly use is the cutaneous with scarification. Here again the flexor surface proves itself most sensitive. The skin is cleaned with alcohol or ether, and with an ordinary cambric needle, with a light back and forward movement I remove a small amount of the epidermis, my scratch being about one-eighth of an inch long. Serum should exude but I try not to produce bleeding. Scarification may be done with a regular scarifier as when doing the von Pirquet test. A small amount of powdered protein is now picked up on a moist sterile tooth pick and gently rubbed over the scarified area. A control is rubbed in the same way with a clean toothpick, however omitting the use of any protein. This control I allow to serve for as many reactions as I



happen to be doing at that time on the same forearm, thought at times I have one at the top and bottom of a row of tests. A positive reaction manifests itself as in the cutaneous method; the time element is also about the same.

3. The most sensitive test in my hands has been the intracutaneous. In children particularly this entails considerably more labor and persuasion. Moreover, it is not practical where a wide range of proteins is to be tested. However, when in doubt as to a particular protein, after the cutaneous test has been performed it may prove of tremendous help. It consists of the intracutaneous (not hypodermic) injection of a small quantity of the protein in solution in sterile water or normal saline, an equal amount of the conducting medium being injected from a syringe free from any protein, as a control. The reaction is similar to the others mentioned, but is more sensitive. The duration of the reaction is slightly prolonged. By the use of measured quantities a standard is established which is impossible in the cutaneous methods. Hypodermically the reaction is practically nil, though a systematic reaction is possible.

Other methods carry obvious disadvantages. The precipitin reaction requires a rabbit or pig sensitized for each protein tested. The technic is simple enough if we could keep on hand constantly, for a comparatively small demand, enough sensitive sera.

The anaphylactic test is one that almost all patients perform on themselves, either intentionally or otherwise. It merely means the ingestion of the specific protein, with the clinical reaction.

The Abderhalden I just mention. I have never employed it. If, by whatever method we have employed, we find a sensitization to some protein, we should continue until we have determined whether or not a sensitization exists to some other protein or proteins. When we have exhausted our available list we must remember that there may be still others, but very fortunately, though at present inexplicably, when we produce an immunity to one protein we usually find the sensitization to any others markedly lowered or gone.

Having found the protein that produces the trouble in a given case we of course turn at once to relieving the condition and aim at an ultimate cure. We then have two courses open to us:

1. Total and *absolute* abstinence permanently, or at least over a long period.

2. Artificial immunization.

The latter is usually preferable and often quite necessary, for the proteins which are the most common offenders are found in foods in every day use in the household, rich in a simple protein (e. g., eggs, milk, etc.). From these abstinence would prove a tremendous hardship at best, for the slightest trace may produce symptoms.

Then let us assume that immunization is desired in a given case. To accomplish this we must give the protein in question to the child in such amounts that the symptoms will not be

aggravated thereby. It must be given in short enough intervals not to increase sensitization, in gradually increasing dosage, and over a long enough period to produce immunity. These points vary in each individual case and require the exercise of some judgment and experience.

Theoretically, we should give just a trifle less of the protein than is required to utilize the free specific ferment in the tissues. Excess will cause the elaboration of more ferment, again in excess, and will increase sensitization and exacerbation of the clinical symptoms. Practically we have no way of determining this to so fine a degree, but approximations which will serve well in clinical work may be made at the beginning, and during the course of treatment by:

1. Our clinical results.

2. Cutaneous or intracutaneous inoculation of the protein in various dilutions.

3. By differential blood counts (eosinophilia).

4. By precipitin reactions.

One or more of these methods should control our initial dosage, and the increase in dosage as immunization progresses.

Having determined our protein, and in a measure the degree of sensitization, how will we administer the protein for immunization?

Viewed from the standpoint of results alone the subcutaneous method would always be chosen, for here we introduce into the tissues directly by a safe route known amounts of protein in the unsplit state. In adults I should employ no other method; in children, however, it has obvious practical objections. My next preference would be for nasal and throat sprays, of known dilutions of the protein, gaged by the dermal reactions.

The method that I most commonly use is the administration by mouth of the protein, usually contained in small capsules. Both of the last methods are open to the objection that we cannot control the actual absorption, and in the last method again we do not know how much of the protein may be digested (fully split) before it lends itself to the absorption. However, I have obtained good end results by both of the last two methods.

As a sort of a postscript I should like to say just a word about those infants suffering from eczema who are entirely breast fed. They almost always give a reaction to egg or cow's milk protein. They are probably sensitized by the passage through the mother's breast, of partially split proteins, at irregular intervals and in irregular amounts. I have no experimental work to support this theory, but hope to have the opportunity to investigate this point in the near future.

I have selected three cases to illustrate the points brought out in this paper, and I will sketch them very briefly for this purpose.

A striking case asthmatic in character, Italian child, aged 4 years, family history negative, Mongolian idiot. Breast fed until 2 years old, then put on cow's milk. Owing to a superstition it was thought by the parents that if the child were given sheep's milk his mental condition would clear up. They procured a ewe and gave the milk with cow's milk, then went over entirely to sheep's milk. He developed a barking, brassy cough of such character that others in the neighborhood in the Italian settlement insisted that the family move. An analysis of the sheep's milk showed 10 per cent. of fat. Cutaneous tests were performed, and a weakly positive reaction to sheep's milk was found. Cow's milk, extracted fat, egg albumen, etc., remaining negative.

They were told to withhold all sheep's milk and a saline cathartic was given. In eight days the child was coughing only mildly, and in another week he had no cough and only a rare musical râle could be heard in the lungs. He was under observation for three months longer, on a general diet of course free from all mutton products, and there was no return of his symptoms.

A case of eczema, white, male, aged 4 years, 10 months, April 23, 1914. Seen by courtesy of the Department of Dermatology of the Massachusetts General Hospital. History is an extract of the notes of this department. Normal delivery, normal at birth. Was entirely breast fed until he was put on a general diet. Now the child has a general diet. Present trouble began when the child was 8 months old. The skin has never been clear since. The skin lesion is at first bullous, and later crusty and scabbing. This covers the face and whole body surface. At present butter is not permitted and the diet is practically fat free.

August 1, clinical condition has not improved noticeably.

Tests performed showed a reaction to cow's milk casein.

August 7, since August 3 all food containing cow's milk has been withheld. Skin condition has markedly improved. External treatment was also changed but several days earlier, and improvement dates from withdrawal of cow's milk. In ten days more the skin was clear except for a moderate amount of scarring.

October 4, skin has remained clear on a diet free from cow's milk. Clinical test was refused by the parents.

A case of eczema, breast fed, March, 5, 1917, Bell Memorial Hospital. Lesions on face, scalp, forearms, and buttocks, dry and scaling, with erythematous base in places. Moist areas are intermingled with dry scales, which are rather heavy. Also a few small, irregular papules with surrounding erythema.

The baby has been entirely breast fed to date, and has had nothing else except a little condensed milk in water a few times during the first week.

Has been on local applications of ointment for some time with no effect on the condition of the skin. The lesions appeared ten weeks ago, when the baby was 6 weeks old, and have grown gradually worse ever since. Given a wash of phenol, zinc oxide and lime water, and lanolin.

March 9, 1917, stool examination negative. Breast milk, percentage of fat normal.

March 14, 1917, condition aggravated slightly. Food tests, hen's egg negative. Wheat negative. Cow's milk casein positive. Horse serum negative. Oat protein negative.

March 21, 1917, much drier, has been having a teaspoonful of cow's milk daily. Lassar's mild resorcin paste in place of lanolin.

April 4, 1917, mother has refrained from all beef products for two weeks until last night, then ate a dish of ice cream. Skin is much improved, but about three hours after the ice cream was eaten the baby was put to the breast. After a few swallows the baby started to vomit. This continued during the next

thirty hours, and the baby refused all attempts to induce it to nurse further. Puffiness developed about the eyes and the feet became swollen. There was moderate but well marked dyspnea.

April 9, 1917, the baby was again seen in the clinic. The skin was markedly exaggerated, in fact, worse than it ever had been. Is again taking the breast well. Goat's milk was again strongly recommended.

April 18, 1917, ever since April 3 the mother has strictly abstained from all beef products. The skin now shows a red scarring condition, but is entirely clear from all moisture. Mother has developed a breast abscess. Baby put on goat's milk.

April 24, 1917, much of the redness has left the skin, which is comparatively clear except for a few papules here and there.

The baby was seen again in August and the skin was and had been entirely clear.

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#### REFERENCES

- Lust: *Jahrb. f. Kinderh.*, 1913, lxxcii, 383.  
 Hahn: *Jahrb. f. Kinderh.*, 1913, lxxvii, 405.  
 Modigliani and Binini: *Policlinico*, 1914, xxi, No. 51.  
 Schloss, O. M., and Whorten: *Am. Jour. Dis. Children*, 1916, xi, p. 342.  
 Schloss: Paper read before the American Society for advancement of clinical investigation, May 11, 1914.  
 Talbot: *Bost. Med. and Surg. Jour.*, Vol. clxxi, p. 708.  
 Talbot: *Bost. Med. and Surg. Jour.*, 1916, Vol. clxxv, p. 191.  
 Blackfan: *Am. Jour. Dis. Children*, 1916, Vol. 11, p. 441.  
 Strickler: *N. Y. Med. Jour.*, 1916, Vol. civ, p. 198.  
 Hoobler: *Am. Jour. Dis. Children*, 1916, Vol. xii, p. 129.  
 McBride and Schorer: *Jour. Cutan. Dis.*, 1916, Vol. clxxv, p. 70.  
 Baker and Floyd: *Bost. Med. and Surg. Jour.*, 1916, Vol. clxxv, p. 199.  
 Longcope: *N. Y. Med. Jour.*, 1916, Vol. ciii, p. 457.  
 Elssesser: *Jour. Infec. Dis.*, Chicago, Vol. xix, No. 5.  
 Berger: *Archiv. Ped.*, October, 1916.  
 Recent literature is fully summarized in articles by Schloss and Whorten, *Am. Jour. Dis. Children*, 1916, xi, p. 342, and Talbot: *Bost. Med. and Surg. Jour.*, 1916, clxxv, p. 191.

#### A MODIFIED AGNEW'S OPERATION FOR THE RELIEF OF WEBFINGER PRODUCED BY ROPE BURNS

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Scar tissue contractures between the thumb and index finger sometimes produce a deformity analogous to congenital web-finger. The same

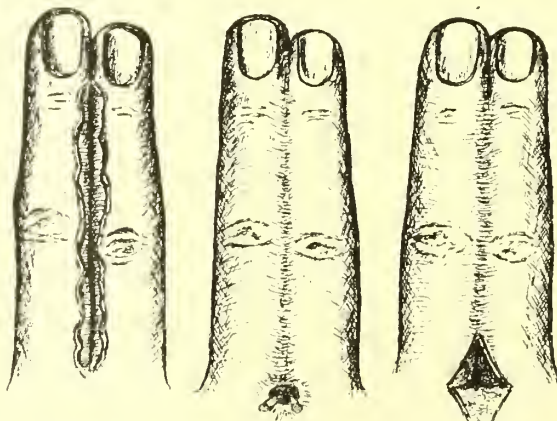


Fig. 1.

Fig. 2.

Fig. 3.

may be said of changes occurring between the other digits as a result of burns. In the congenital cases there is often a scarcity of tissue



on which to operate. Several cases reported<sup>1</sup> show the joint capsules to be organically joined together in some instances. The essential relief measure in both congenital and acquired cases, however, is to prevent recontraction of the scar tissue from the bottom of the web with subsequent limitation of motion in the affected parts.

The operations commonly employed at this time are those originally recommended by Agnew and Didot, experience having shown that the simpler and cruder early methods were usually unsuccessful. The earliest attempt was simple division of the web with suture of the

at the outset a bar is laid down to prevent further contraction at the most vulnerable point. The viability of the flap is carefully ascertained before the web is finally divided and sutured. Should the tissue fail to live there still remains some undisturbed tissue for use in other ways.

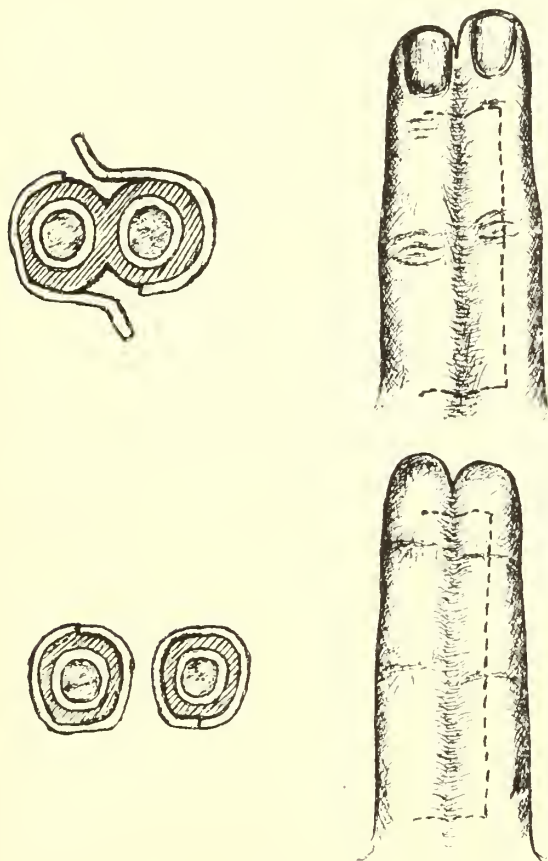


Fig. 4.

edges (Fig. 1). This uniformly resulted in contracture.

The next and more successful was the insertion of a silver wire set-on through the base of the web. After the tract had become epithelialized and cicatrixed, giving a fixed basic point, the web was divided and the margins sutured (as in Fig. 2).

Agnew's operation (Fig. 3) consists in raising a triangular flap from the base of the dorsal surface of the web and carrying it through a horizontal slit in the base of the web and securely suturing it to the palmar surface. Thus



Fig. 5.

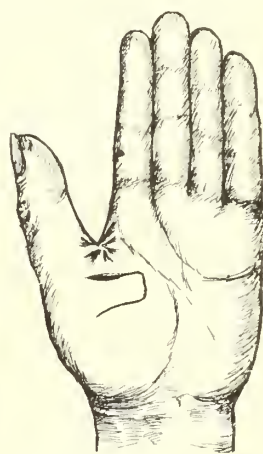


Fig. 6.

According to Binnie, Schrieber<sup>2</sup> has secured excellent results by this method.

The more familiar operation of Didot consists in making a series of rectangular, swinging door flaps from the palmar and dorsal surfaces of alternating sides of the web. The web having been separated into front and back planes, the flaps are reflected onto the finger to which their bases are respectively attached thus covering the defects. This operation also has proven successful in the main (Fig. 4). The

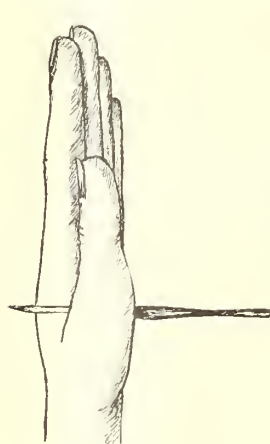


Fig. 7.

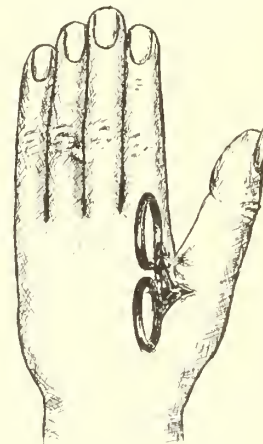


Fig. 8.

flaps are of necessity fragile and somewhat in the nature of a graft. In a congenital case that I saw during my internship the flaps necrosed in large part, enough remaining at the base, however, to secure a good result. In another

1. Newhof, H., and Oppenheimer, E. D.: Congenital Contractures of the Fingers, Surg. Gynec. and Obst., 1914, XIX, 193.

2. Schrieber: Zentralblatt, für, Chir., Nov. 29, 1910.

case I saw the typical Agnew's flap lost by necrosis. In still another case of my own, following a burn, granulation occurred at the bottom with moderate recontraction. This was partially controlled by adhesive plaster pressure.

What is done and what happens at the base of the web between the two digits determines the

Miss Y., schoolgirl and pianist, aged 16, had seven years previously sustained a severe rope burn between the index finger and thumb of the left hand. The ensuing scar tissue shortened the web between the two until she could span only five notes on the piano instead of a full octave, as formerly. The distance between the thumb and index finger was correspondingly reduced. Two years afterward an attempt was made by her physician to correct the difficulty by cutting out the scar and sewing up the wound longitudinally. This resulted in a more slightly scar without improving the function. This was the condition at the time of operation five years ago. (Fig. 5.)

Three means of repair were considered:

1. Section of the scar transversely with suture in the longitudinal direction.
2. The analogue of Didot's operation for web-fingers (Fig. 4).
3. A modification of Agnew's operation now to be described. The character of the tissues made this seem to be more feasible than the typical Agnew's flap.

A tongue-shaped flap was lifted from the palm of the hand, partly from the surface over the middle of the second metacarpal and partly

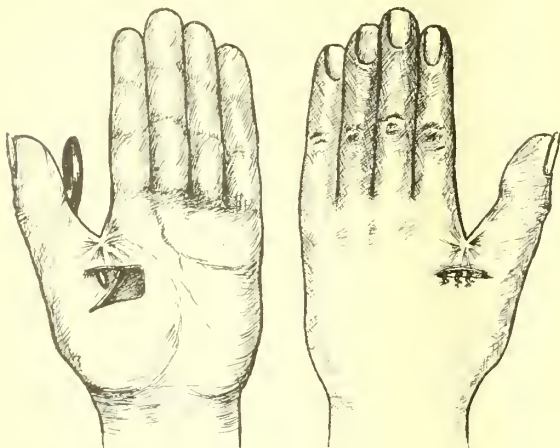


Fig. 9.

Fig. 10.

outcome, and this slight modification of Agnew's operation may be useful in either of two conditions. Either the original tissue at the site of the typical Agnew's flap may not be suitable, or some previous operation may have failed leaving the cicatrix in an unfavorable condition. I believe that between the finger and thumb the conditions are usually more favorable for this modification than for the typical Agnew flap. If any secondary operation is to be successful a considerable period of time must elapse between successive disturbances of the circulation

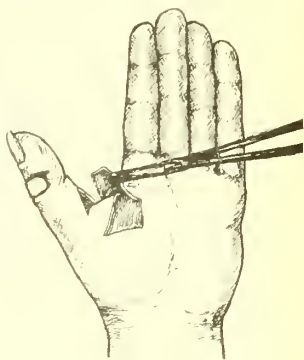


Fig. 11.

of any given piece of tissue and in some instances the same piece can never be disturbed again successfully. Even if its nutrition does not fail, it may lack the pliability necessary for good function.

The modification to be described is illustrated by the following case history:

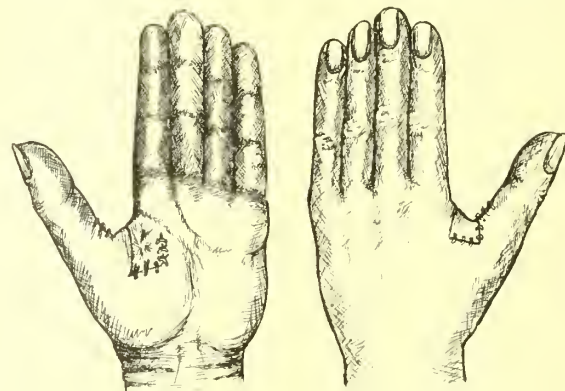


Fig. 12.

Fig. 13.

from the thumb index web (Fig. 6). This was thrust through a liberal stab wound (Figs. 7 and 8) in the web and sewed on the dorsal side to the edge of the stab wound as shown in Fig. 10. The base of the flap was outward and downward and its outer side corresponded to the palmar stab wound as shown in Figs. 6 and 8. This left the tissue of the cicatrix or web above as a bar or bridge from the thumb to finger and still intact. At the end of three days the flap was found to be viable. The bridge or bar of tissue was severed at its outer or thumb end and swung inward to the palmar surface of the hand (Fig. 11) where it was sutured into the gap left when the tongue-shaped flap was lifted. Several stitches approximated the edges of the skin on the thumb where the web was detached (Figs. 12 and 13). Early passive and active motion enabled the patient to retain the mobility thus gained.

The end result was good from both an anatomical and a functional standpoint.

416 Argyle Building.



# THE JOURNAL

OF THE

## Missouri State Medical Association

MARCH, 1920

### EDITORIALS

#### THE NEED OF WOMEN ON EDUCATIONAL AND SANITARY BOARDS

It has been noted during the last decade, and especially was it evident during the Great War, that the attitude toward women was undergoing a decided change and that even those somewhat prejudiced men, who had comfortably outlined woman's duties so that their own peace would not be disturbed, were waking up to the fact that perhaps after all they had something to learn. Of course, on the side of women, there has been a growing demand for some recognition—on the side of the milder and gentler women, while on the side of those women who wanted full recognition and at once, there has been no mildness, no gentleness, but a blattancy and a belligerency that were not always in the best taste. Nevertheless, the combination of mildness and belligerency has won the day, and at present even the most obdurate and prejudiced male hangs his head in shame when his lack of common sense, his nonappreciation of the new currents which are swirling through the life of today, drive him into making assinine remarks about his undoubted ability to manage all things and woman's undoubted disability to manage anything outside her home. Hence the times are ripe what with the "new" feeling toward woman, to expatiate on her good qualities as they would be best evidenced in certain public positions.

There is no doubt that when it is a question of the education of the masses—public school education—or when problems of hygiene and sanitation are to the fore, women should be an ornament and not a detriment to the boards which control these matters, whether they pertain to the city, state, or country at large. A woman's mind, especially when brought opposite the question of education, sees much more clearly and much more readily than the average man's. And it sees more readily and grasps educational matters more quickly because it has the quick and unfailing perception of "spotting" at once just what is needed for the educational

betterment of the growing mind. Hers is an open mind and a somewhat discontented and aggressive one; her own "hamperings" instituted by false ideas on the part of her teachers and her parents being responsible for the discontent and aggressiveness. In short, she would enter on her duties as a member of her respective board with the keen desire not to repeat for others the "wrongs" which had been done her, and being apprehensive that no repetition should take place, her mind is on the *qui vive* lest by "nodding" the "wrong" will be perpetrated again. And the "wrongs" are the sort which to most men connected with school boards are of infinitesimal worth, because from the man's standpoint they are "imaginary"—and, even if true, have but a slight bearing on the future of the child. But they really have a decided bearing; and the so-called "manly" attitude of the male members of school boards toward the many "infinitesimal" questions bound up in the education of the young—the web and woof of education is a patchwork of these questions—is not a "manly" attitude at all but one characterized by weakness and laziness which have retarded education along lines that should obtain today: the recognition on the part of every teacher of the fact that every pupil, no matter how "smart" or how "stupid" he or she is, is an individual to be studied by the teacher as such to the end of the teacher directing the studies according to the bent of his or her mind. All this may not be possible in our public schools as they are constituted today, but even so, the thought that the individual's needs should be looked after is a good and sane thought and will do much to bring about a more complete and more worthy education of the youth of this country. And every enlightened woman knows the worth of studying the individual—its future value to the country. She knows this because her whole life has been a study of individualistic traits: her perspicuity, her chief mental asset, stands her in good stead.

As regards the problem of hygiene and sanitation, a woman's life is dedicated more or less to these, and if added to the training she receives under the parental roof her mind has been eager to grasp the true significance of their widespread worth as applied to all sorts and conditions of people, her equipment is of such a nature that what with her natural combativeness to right any wrong as soon as possible, her work cannot but be effective. Hence, here, too, she would be of considerable, perhaps of great value on a board in directing men's thoughts along the right channel.

## JEFFERSON CITY MEETING

The preliminary program for the annual meeting of the association to be held at Jefferson City, April 6, 7, 8, is published in this issue. The completed program will be given in the April number when all information concerning arrangements will also be published.

The meeting will begin on Tuesday instead of on Monday as has been customary for the past several years and extend through Wednesday and Thursday. All meetings will be held in the State House, and the House of Delegates in the Senate Chamber. The Central Hotel will be headquarters. Other hotels are the Madison House and the Monroe Hotel. Members are urged to make reservations early.

The Missouri State Roentgen Society, composed of physicians who specialize in roentgenology, will hold a meeting on Monday, April 5, for which an attractive program has been prepared by the roentgenologists. This is the first meeting of that body, which was formed during our session last year at Excelsior Springs. Those interested in roentgenology who desire further information concerning the session should write to Dr. C. O. Donaldson, Lathrop Building, Kansas City.

## A MEDICAL WAIF

Some one has recently written that the science of medicine has made more progress during the past fifty years than for fifty centuries before that time.

It has not only made this stupendous advance but in addition has excuted a complete *volte-face* in its methods; a fact we seem to realize but dimly, if at all. Prior to a half century ago, therapeutics—almost if not entirely empirical—was the high note in the medical diapason. Potent drugs were at hand, concrete and comprehensible; while etiology, pathology and diagnosis were a vague will-o'-the-wisp, intangible and elusive. In this new, this laboratory era, therapeutics is no longer king. Surgery is in the ascendant, one would say had almost reached the zenith, so brilliant has been its meteoric rise. Preventive medicine has robbed therapeutics of some of its richest opportunities. So it is no wonder that frequently of late protests have been voiced against the relegation of therapy to the limbo of forgotten things. In this issue\* Dr. Thaler presents a critical analysis of the present day attitude of medical school curricula toward the science of therapeutics.

There is no doubt that the time allowed the teaching of therapeutics *per se* in most of our colleges is highly inadequate. But in addition the method of presenting the subject is likewise open to serious criticism. The courses as a rule are too long drawn out; too diffuse. Including botany, pharmacology and materia medica under this general head, we find an hour or so a week devoted to the subject at intervals scattered over a period of three or four years. An intensive course, compact and concise, of five or six months' duration from which all superfluous elements have been eliminated would surely make a much more vivid and lasting impression on the student mind. The deletion of much that is useless and unnecessary would leave the cerebral storehouse unencumbered and free for more important things. Imagine the mental state of the first year student after having some such paragraph as the following flung at his head by an overzealous medical botanist:

Gentlemen: Let us consider *podophyllum* (May apple). It is the rhizome of *Podophyllum peltatum*, the mandrake, an herbaceous perennial of the natural order Berberidaceae, growing in the woodlands of Canada and the United States, having a pale-green stem, with a single white flower at its summit. Its active principle is a *resin* named *podophyllin*, which is official, and contains two isomeric glucosides, *podophyllotoxin* and *picropodophyllin*; also podophyllinic acid and protocatechuic acid. *Podophyllum* probably contains the alkaloid *berberine*, which is found also in berberis, hydrastis and other plants—

and so forth, not to mention dosage, preparations, physical action, incompatibles, therapeutics, and all the rest.

Medical students in the past have been obliged to undergo this sort of thing; for that matter, some of them may still have a similar incubus riding on their backs.

Unfortunately, there is no such thing as specializing in therapy. The man who comes nearest to being fully conversant with the subject of drugs is, as Dr. Thaler suggests, the druggist. Why should there not be a closer *rapprochement* between the physician and the pharmacist, who is or should be a specialist in drugs. Like the armorer of old he it is who fabricates the weapons with which the modern medical crusader goes out to battle with the ancient foe, disease.

In summing up the total amount of time spent on this subject in any school, the number of hours as set down in the catalog is of course no criterion. If all a student learned of therapeutics was what he got in those few periods he would be in sorry case indeed. We all realize

\* See page 97.



certainly, that each specialty carries with it its own individual therapy. In this regard internal medicine stands first of course; pediatrics possibly second, and so on down the list until with surgery we find its vanishing point.

It would appear then that treatment is considerably slighted in the teaching of these branches. Enthusiasm for exquisite refinement of diagnosis leaves little room for it. Any real sufferer who after days of travail and trial by tube, barium, and bismuth—not to mention duodenal buckets—receives as his only reward a minute capsule three times a day has a perfect right to cry out on this business and run off huffily to a surgeon. The surgeon, with the diagnosis ready-made for him, is in a position to do something and do it quick. And consequently therapy gets another on the nose while the patient gets action; which he should have gotten in the beginning but did not.

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#### CONAN DOYLE: PHYSICIAN, NOVELIST, SPIRITUALIST

It would seem that Conan Doyle is an exceedingly restless person and that his quest for happiness has not been successful. He was not content as a physician and soon forsook the medical profession. This was not surprising, since the "urge" in him was not along medical lines but along altogether different lines. No doubt the humdrumness of his practice wore on his nerves just as it wears on the nerves of those who are not as fortunate as he in having other talents whereby the humdrumness can be thrown off on entering other and more alluring fields of activity. When Conan Doyle turned novelist the medical profession throughout the world rejoiced thereat, for it soon recognized his undoubted talent as a novelist and made much of a former member who could create a Sherlock Holmes and a Dr. Watson. The indiscretion in publishing his medical stories, "Round the Red Lamp," which aroused the ire of his medical confrères in London and eventually resulted in his being expelled from the British Medical Association need not be emphasized here, for it was only a slight slip in medical ethics such as numbers of well-conditioned men are likely to make when the tide of a literary success carries them to heights which cause dizziness and therefore lack of judgment.

But Conan Doyle did not rest content to be the creator of Sherlock Holmes and Dr. Watson. Ere long he wrote historical novels which were mere pot-boilers by comparison with his

detective stories. "Micah Clark," "The Refugees," "The White Company," and "Brigadier Gerard," are interesting but are nevertheless weak imitations of the works of the elder Dumas; they were unworthy Conan Doyle's talent and they illustrate his restlessness—his reaching out for something new and his non-realization of what he could do better than any other man in England in his time—create distinctive characters which will live for many years. Strange, indeed, is the mind that fails to understand its limitations, especially when the mind is an out-of-the-ordinary one, but stranger is that mental state which fails to grasp the meaning of approval on the part of the discriminating. Conan Doyle must have known of the impression his detective stories made on the public: the material results were evidence enough. But granting that he was above any consideration of this sort—dwelt in an empyrean that took small account of money, the praise in the best literary journals should have "placed him right" as to his special province in the realm of literature. But his judgment went awry just as it did in the matter of publishing his short medical stories, gathered from his "intimate" note-books and published without any disguisable additions, and which was, as already stated, a forgivable "crime," and even more so, for by taking up the historical novel and later the writing of historical works his reputation as a literary man suffered to so great an extent that there are some very good critics today who are already talking and writing about his spurious position in the world of letters, and are scolding the critics of some twenty years ago for having overpraised the creator of Sherlock Holmes and Dr. Watson.

As if the foolish steps taken by Conan Doyle to destroy that which he built so well were not sufficient, it is our painful duty to chronicle the latest phase of his mental development—spiritualism. Here we have a complete reversal of the man: the mundaneness, sane and healthy, garnered from his knowledge of medicine and from his practice, and carried over into his sane and healthy detective stories, is completely wrecked; and on what rocks! Here is his description of Paradise: "Happy circles live in pleasant homesteads, with every nicety of beauty and of music. Beautiful gardens, lovely flowers, green woods, domestic pets—all these things are fully described in the messages of pioneer travelers who have at last got news back to those who linger in the old dingy home." No divorces occur, the irritable husband no longer

vexes his patient Griselda of a wife, everybody works "for the joy of the work," and the "equivalents" of alcohol and tobacco will obtain!

Although a spiritualist here on earth, afflicted with visions that waft him miles above the wear and tear of life, its jars and exasperating inconveniences, directly Conan Doyle arrives "on the other side" his practicality is evidenced. We have heard of Talmadge's many descriptions of what he was sure was the life beyond—drawing-rooms with blue satin covered furniture (Talmadge's idea of esthetic taste)—and we have heard the spoutings of other visionaries as to what they "saw" in regard to the makeup of the next world; but never have their practical and comforting ideas been so all-embracing as are Conan Doyle's, who assures us of well-behaved husbands, charming wives and the "equivalents" of first-class tobacco and unadulterated drinks!

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#### NATIONAL TUBERCULOSIS ASSOCIATION MEETING IN ST. LOUIS

The National Tuberculosis Association, which meets in St. Louis, April 22, 23, 24, is one of the most virile of national medical societies. It has made possible the correlation of the work along antituberculosis lines so effectively that the death rate of this disease has fallen from 192.2 per 100,000 population in 1905 to 147 per 100,000 in 1917. It has obtained the names of all the tuberculous rejects of the government draft, numbering 62,000 cases, and instituted follow-up work on them through the local tuberculosis societies. Its modern health crusade has been organized amongst the children of the United States, there now being more than 3,000,000 children enrolled in this movement which is designed to teach the children to take care of their bodies so that their resistance to tuberculosis is increased. The amount of good in such a movement cannot be estimated, and future generations will become enthused in public health work. It has been invited to act as adviser on tuberculosis to the Surgeon-General of the United States Public Health Service.

The association publishes *The American Review of Tuberculosis* in which all the scientific work on tuberculosis done in America is presented, together with abstracts of the work done in all parts of the world. It also publishes a lay journal, *Out Door Life*, through which the laity are informed of all the new methods used in the recognition and treatment of tuberculosis, and the patient encouraged to take the cure sufficiently long to be of service. Among the many

other good movements of the association is the fostering of the Framingham experiment and tuberculosis institutes which make a specialty of training tuberculosis workers, both medical and nursing, spreading educational literature, and constructing moving pictures.

A more opportune time for a tuberculosis convention could not occur in our midst. The stimulation of interest in tuberculosis in St. Louis at this time, when the severe arraignment by the Grand Jury of our only tuberculosis hospital, Koch Hospital, is still ringing in our ears, will certainly be strengthened through the proceedings of this convention. It has been known by the city authorities, by tuberculosis workers, by physicians in general, and by the public, that St. Louis, the fourth city in the Union, spends less on the tuberculosis problem than any city approximating its size.

At this convention will be heard some of America's foremost authorities on tuberculosis who will bring to us messages that we must not ignore. If the city authorities, the physicians, and the public will profit by the information and experiences these men found necessary for a successful tuberculosis campaign, St. Louis can be brought to the first place in tuberculosis activities.

As tuberculosis is conceded to be three-fourths a community problem and one-fourth a medical problem the press of St. Louis can perform a great service to the people by bringing the discussions of this convention before the public.

Dr. Victor C. Vaughan, dean of the University of Michigan Medical School and one of the most skilled sanitarians in this country, is president of the association; Dr. George Dock, chairman of the clinical section; Dr. E. P. Opie, chairman of pathological section; Dr. H. W. Hill, chairman of the sociological section, and Miss Mary Gardner, chairman of the nursing section.

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#### TRACHOMA INCREASING IN MISSOURI

The report from Dr. W. P. Raynor, who is making a survey of trachoma in certain counties in the southeastern part of the state for the information of the United States Public Health Service, gives us some definite knowledge of the prevalence of this disease—knowledge that should arouse the people to a realization of their danger and impel them to join in the fight to eradicate a preventable disease that is responsible for so much misery, paupery and blindness.



Dr. Raynor's report shows that there are 349 cases of trachoma in a total of 4,439 children examined in the schools of six counties. If this average should hold true for the entire section of the state it would mean that almost 8 per cent. of the children are trachomatous. The report does not mention trachoma among adults but it is reasonable to suppose that there are a large number of cases in the adult population and when these are tabulated we will have valuable information for conducting the war against this disease.

Trachoma if untreated ends in the total destruction of sight in about three-fourths of those who are attacked, and the rest of them will have impaired vision. On that basis it can be said that there will be an addition of 261 persons to the blind population of the six counties that have been surveyed, all among children, unless they are given persistent and intelligent treatment. New cases will be constantly developing if people are not taught and the knowledge drilled into them that this disease spreads rapidly from person to person when the well known precautions to prevent its communication to others are not rigidly enforced. Every case of sore eyes ought to be put under treatment, examined by a physician competent to discover the earliest symptoms of trachoma, and proper measures established to prevent others from becoming infected.

Naturally, it is the physician's duty to warn the family and the proper officials of the dangerous nature of trachoma, but he can do nothing more than that if the people themselves will not provide the needed sanitary precautions. Indifference to the warnings of competent medical observers is the principal reason why trachoma is on the increase in Missouri. But that fact should not, and will not, deter the physician from persisting in his warnings, especially now that the survey is in progress and its results can be easily grasped by the intelligent laity.

This is a subject that may well form a topic of discussion at the meetings of the county societies in the southeastern portion of the state and the county officials who are responsible for the enforcement of laws governing sanitary conditions should be invited to the meetings and participate in the deliberations. It should be made plain to these public officials that without their assistance and without intensified cooperation of the people the physicians are utterly powerless to prevent the spread of this insidious foe of human eyesight, and the ways and means by which that public cooperation can be intelligently applied should also be presented in such

a manner that the officials and the public cannot fail to understand their obligation and their responsibility in promoting their own physical welfare. Dr. Raynor should be present at these meetings whenever possible, and the newspapers in the counties should be given prepared articles free from technical terms describing the dangers of trachoma and the methods of preventing its spread. The report of Dr. Raynor is published in this issue on another page.\*

## OPINION AND CRITICISM

### THE HIGH COST OF LIVING AND THEN—

The matter of transplanting a human being of the adult sort from one country to another, and then, safely ensconced in one's chair and comfortably, announcing that on account of the transplantation only happiness should result, as is done so often when the superficial American philosopher fails to recognize the ethnic differences between the American and the European, is a twice-told tale, and great is the satisfaction of the would-be philosopher when things turn out according to his predictions. But when they do not, is the philosopher so sure of his ground? Is he satisfied with his comfortable philosophy? No doubt when things go awry he blames the European on account of his or her lack of adaptability to the manner of living in "God's own country," and is decidedly harsh in his judgment. But there is another side to the problem and a very important one, although in dwelling on it some thought must be given to our imperfections as regards our mode of life and some forgetfulness must obtain of the "supernal" perfections in "God's own country."

The incident reported in the press of recent date, which occurred in Council Bluffs, is a case in point. The French bride of a former soldier acted "queerly," and her husband being solicitous of her mental welfare or rather not sure himself whether his wife was completely insane "or just going that way," had her taken before a board of examiners to decide her sanity or insanity. Fortunately, the wise members of the board of examiners inquired into the reasons for the wife's mental upset and soon learned that the high cost of living had so greatly perturbed her that worry sat astride her day and night lest the income would not suffice to meet the inrush of bills. The board, after due consideration, gave both husband and wife some good and sound advice and of course pro-

\* See page 130.

nounced the wife sane. We take it, the comfortable philosopher of the easy chair, whom we have pictured above, was lacking from the board of examiners, otherwise the wife would not have fared so well—in fact, we are sure he would have prated on the virtues of adaptability and the unreasonableness of the wife in not appreciating at once the “supernal” perfections of “God’s own country.” And, of course, he would have pronounced her insane!

Now that there is a decided influx of French brides of former soldiers into this country, it would be well for all philosophers of the easy-chair sort and those who are peripatetic because their philosophy has never yielded them enough money to buy an easy chair, to remember that the French are an exceedingly economical nation, in fact, have made a cult of frugality. The prices which “rage” in this country at present must appear to them as something monstrous and our manner of living as something Brobdingnagian. The lower middle classes in France care not a whit how the millionaire lives, nor do the middle classes. Hence a member of either class coming to this country and living among us, cannot be aught but greatly surprised, greatly disturbed, and cannot but be affected in no small degree by our many foolish and almost infantile extravagances to keep up appearances and imitate those above us in the hope of not being thought economical and frugal—the greatest disgrace, we take it, that can befall an American. Hence the perturbation on the part of the French bride at Council Bluffs and her nervousness and her acting “queerly.”

But why limit ourselves to French brides? Is it not a fact that the majority of households are undergoing today the same upsets which characterized the French-American household at Council Bluffs? No matter how “American” the attitude of the American husband and the American wife may be, how decidedly obtuse they may be to the increase of expense in living as it occurs today, they are not so indifferent that they are not “nervous” at times. If they were not “excited” under present conditions we could not class them as human beings. And is this daily upset for the good of the nation? Have our neurologists inquired into the increasing nervousness of the American people? Are they aware of the wretchedness in some households, of the unhappiness in others, and, in the mildest cases, of the nervousness of the wife lest the income and the outgo each month will be farther and farther apart? Here is a subject for cogitation on the part of our neurologists, or rather our psychoneurologists who are always

keen for a live subject. The Freudians have explained human tragedies from a sex standpoint, but the cases we have in mind are tragedies which need no Freudian to cut the Gordian knot.

#### THE EROTICISM OF EMILY BRONTË

It is the fashion today among those specialists who are known as “sexologists” to dig into some work of fiction, which has been accepted as an excellent piece of literature—the old and the new books are alike alluring to them—and when they have “discovered” an apparently innocent sentence, bring it into prominence by weaving around it a large number of erotic wreathes so as to prove to an easy-going world that its understandingness has been greatly at fault. This has been done so often of late that he who has read rather extensively the articles of the various “sexologists,” cannot but be influenced by their teachings and necessarily have his love of good literature somewhat spoiled. To state matters more clearly, the man who has been influenced even though not convinced by these writings, is prone to attempt to read into all sorts and conditions of paragraphs in literary works, the inner meaning as illustrated in the writings of the “sexologists”; and although it may be thought that one must be an adept to get at the inner meaning à la sexology, we hasten to assure the reader that this is not the case. The writer is a mere tyro in sexology and yet so greatly has he been influenced by the few articles which he has read, that it is with the greatest ease that he can shake off his normal way of looking at things literary and interpret various paragraphs in standard works of fiction so successfully from the Freudian-sexology standpoint that even the greatest student of this chapter in modern medicine cannot go him one better. Recently he has come across the following passage in Emily Brontë’s masterpiece, “Wuthering Heights,” and this will be quoted in full and then expatiated on to prove the eroticism of the sensitive, refined daughter of a Yorkshire clergyman. To quote: “While enjoying a month of fine weather at the sea-coast, I [Mr. Lockwood] was thrown into the company of a most fascinating creature: a real goddess in my eyes, as long as she took no notice of me. I ‘never told my love’ vocally; still, if looks have language, the merest idiot might have guessed I was over head and ears: she understood me at last, and looked a return—the sweetest of all imaginable looks. And what did I do? I confess it with shame—shrunk icily into myself, like a snail; at every



glance retired colder and farther; till finally the poor innocent was led to doubt her own senses, and, overwhelmed with confusion at her supposed mistake, persuaded her mamma to decamp. By this curious turn of disposition I have gained the reputation of deliberate heartlessness; how undeserved I alone can appreciate."

What riches for a sexological interpretation the foregoing paragraph holds! How easily one can read into the supposedly innocent lines of the authoress! Mr. Lockwood was evidently the only son of a doting mother who effeminized him in many ways. She made him wear "pretty" clothes until these evoked criticism from all *his* relatives. The father was stern, unrelenting, and disliked his son. The son feared his father and even hated him—repressed his hatred out of love for his mother. First step toward regression! As the boy grew up he "saw" his mother in all his girl friends, and even during his first courtship and when he slipped his arm around the girl's waist, he imagined it was his mother. But his sexual fancies in regard to his mother were not vigorous enough to cause him anxiety. Of course, on account of his love for his mother (sexual non-gratification, suppression, Oedipus) and on account of the mother's love for her son preventing him from knowing the full truth about the sexes at the mature (?) age of ten, he began to masturbate, which practice he kept up until his eighteenth year. When he met the "real goddess" of Emily Brontë's story he was suffering from the obsession of mother-love and his secret practices. As Mr. Lockwood says: "She understood me at last and looked a return—the sweetest of all imaginable looks. And what did I do? I confess it with shame—shrunk icily into myself." How evident is his fear that when the "goddess looked a return" she would note at once that he saw in her the image of his mother and that he was a victim of masturbation! Would he otherwise have "shrunk icily" into himself? We hardly think so. As for the heroine of this episode, judging from her behavior—the suddenness with which she decamped—she, too, had the wrong parents: a stern, unrelenting mother and an amiable, too amiable father. Her obsession was father-love, and directly she looked at Mr. Lockwood—she hesitated about doing this in the beginning—she "saw" in him her father; and fear lest Mr. Lockwood would find out her obsession made her decamp after being "overwhelmed with confusion." Her masturbatory obsession had also a bearing on the suddenness of her de-

parture, since it is a fact that this obsession is generally responsible for confusion, the loss of the proper word, and unaccountable suddenness in one's actions. That both spent some eight months in a sanatorium goes without saying, and that both were not cured until the complete "transfer" took place between the patient and the Freudian doctor, is also apparent. Reading further on in "Wuthering Heights" we are quite sure that Mr. Lockwood's "transfer" was complete: he got over his mother-love bravely and also quit his evil practices. As for the "goddess," we are quite sure she had many recurrences of her psychosis and finally became a frequent inmate of sanatoria—this being due altogether to the fact that she stubbornly refused to "transfer" completely to the attending physician.

## BOOKS FOR LEISURE MOMENTS

*Reading with discrimination broadens the mind  
and strengthens the mental grasp*

DR. RICHARD DERBY is a close observer and, added to this, he has the happy faculty of writing to the point. On reading his book, "Wade In, Sanitary!" (G. P. Putnam's Sons, New York), we realize at once that the things he tells us about actually occurred and that to doubt anything so straightforward as his style of writing would be doing him a great injustice. When he went to France he was unlike most physicians in this, that he did not expect to see the surgical house in order, nor did he expect to have the assistance of trained men, or for that matter nurses who would have been as well disciplined as in a modern New York hospital. He saw things that would have disheartened one of weaker fiber; but being made of the right stuff he pitched into the work at once and never allowed an imperfect organization to get on his nerves. The surgical cases were his to be treated; and even though he does not say so, we are quite sure that had there been a shortage in bandages and surgical dressings he would not have been dismayed but would have found some means whereby good substitutes would have been effected. After hearing all sorts of criticisms about the way the medical department was managed in France before our American physicians went to the assistance of the French, it is most refreshing to read a book such as is "Wade In, Sanitary!" Here is no carping at things which were not up to expectations, no odious comparisons between "what I really expected from so enlightened a people as the French and what I found," no flapdoodleism

which is so characteristic of small-minded men who are always disappointed no matter how favorable conditions are and who never profit from experience. Aside from the points which we have emphasized in this most just and sane book, the respect and regard of the author for the sorely-tried French nation is evidenced on every page. Manliness combined with judgment, sympathy combined with courage, an untiring desire to be of help combined with a full appreciation of the medical men with whom he worked and all the officers of the various regiments, are the high lights of this book; and just because this is the case, we would like to have every physician who worked in France during the war, read it. All honor to Dr. Derby for having written a book that breathes the Americanism which was characteristic of his father-in-law, Theodore Roosevelt, and which heartens one in the belief that honesty and courage and manliness are qualities which the world thinks as much of today as at any former period in history.

P. S.

THE attitude of Miss Agnes Repplier toward the subject of her book, "J. William White, M.D.—A Biography" (Houghton, Mifflin Company, Boston and New York), is that of an appreciative friend and grateful patient, and on every page of this interesting book are evidences of her knowledge of Dr. White's avocations and also of his work as a surgeon. Here is no dry-as-dust "life" of a busy man whose enthusiasms were unbounded and whose endeavors were not confined altogether to his chosen profession. Dr. White, if we have read Miss Repplier's book aright, was a man who was not so thoroughly engrossed in his surgical work that he did not have time for the reading of the best books in literature, or for athletics, or for travel, or for meeting the celebrities who came to Philadelphia as guests of the various clubs. We take it, he was a man of the world in the best sense of this term, with an eye keen for what was worth while and a mind receptive for all those things in the literary world which are of such moment, if one wants to be *au fait* with literary matters. He could turn from surgery to Henry James and enjoy Henry James' literary talk, and he could turn from surgery to football, boxing, and Greek plays, such as "Iphigenia Among the Tauri." A man of many parts was Dr. White; hence his life was filled with many moments that were fruitful in rounding out an education which few of us enjoy.

A less sympathetic biographer than Miss Repplier and one of less literary talent would have turned out a rather dreary book, but on

account of her decidedly intelligent grasp of the subject and also on account of her talent to encase the smallest and least important incident in a framework of words which aptly describe the point or points, the book before us makes the reading thereof a pleasure and an entertainment of many fascinations. It has been said many times that a physician's life must be humdrum, otherwise he is not a good physician, and for some reason this saying has been believed and has become fastened in the memory of most men to the exclusion of any other belief. That this is not always the case is illustrated every now and then in the biographies of some of our medical men; and in no instance has it been better illustrated than in the book before us.

P. S.

DR. WOODS HUTCHINSON has won his spurs as a graceful and instructive writer before now, but never has he written so well and in so illuminating a manner as in his most recent book, "The Doctor in War" (Houghton, Mifflin Company, Boston and New York). Of course, when a writer of Dr. Hutchinson's attainments has a subject to hand of the magnitude and fascinations of the medical side of the Great War, he has just the material he wants; and without saying that his task is easier on account of material that must hold his attention, it can be said in all truth that literary talent that "plays around" medical subjects, in the hope of enlightening the general public, is often at a loss as to what subject to take up next. But granting all this, it must be admitted, nevertheless, that few doctors writing for the general public today could have done the task with the efficiency, the thoroughness, and the perspicacity which characterize all the pages in this book. The western front in the Great War, as we have read thereof in our medical journals and also in our lay journals, has been presented to us in various shapes and forms, the gamut running from the frivolous account to the intensely technical. And although we deluged our minds with innumerable articles and thought we understood, we realize, on reading Dr. Hutchinson's book, that what we took for light was obscurity relieved at long intervals by the mere semblance of light. This can be easily understood when thought is given to the limitations of the purely medical article, no matter how keenly observing the writer may be, and the manner in which the usual magazine article, especially the one that concerns itself with the medical side of the Great War, is manufactured. In Dr. Hutchinson's book we have the purely medical article deprived of its offending technicalities, and with



the background of the Great War; in short, we have a combination of the medical side and the other sides. Dr. Hutchinson went to the front with a mind that was acutely alive to the many phases of the war, and having the right sort of mind, that is, receptive of all the skeins in the fabric, he draws in his book a comprehensive picture and interweaves the medical phase with the military and social phases as only a man of his cleverness is capable of doing. And the picture is an alluring one, for all the lights are high and breathe optimism. Now optimism in the face of the tragic occurrences of the Great War is an unusual note in war books—it is lacking altogether in literary works and but mildly put forth in medical books—and when one comes across it as often as the reader does in this book, it is arresting. But Dr. Hutchinson's optimism stands foursquare, since it rests on the most remarkable achievements surgery and medicine in general have made since the art of medicine became known. Unusual conditions invariably bring forth unusual results; and surely the Great War, which on the side of the Germans was a purely chemical war and not war as has hitherto been understood, caused a new and lengthy chapter to be added to the science of surgery. That the art of surgery girded up its loins and said "Adsum" when opposed by the onswEEP of gigantic tasks, is a page that is written large in Dr. Hutchinson's book, and rightly so.

P. S.

## NEWS NOTES

DR. S. W. CHANDLER, Cassville, has been appointed county physician for Barry County.

DR. R. B. TYLER, health commissioner of Joplin, has announced his candidacy for presiding judge of Jasper County.

DR. ROBERT VINYARD of St. Louis, who has practiced in that city for a number of years, has accepted the position of assistant physician at the Frisco Hospital, Springfield.

DR. J. F. CHANDLER of Oregon, secretary of Holt County Medical Society, has been appointed county physician and also deputy state commissioner of health for Holt County.

DR. G. C. EGGERS, Clayton, who has been health commissioner of St. Louis County for a number of years, has been reappointed to the

same position by the county court and also appointed deputy state health commissioner for the county.

THE supply of radium held by Missouri physicians for the treatment of conditions thought to be amenable to its influence, has been augmented recently by Drs. Vilray P. Blair and Ellis Fischel of St. Louis, who have added 100 mgs. to their equipment.

MR. A. W. JONES, Jr., secretary of the St. Louis Tuberculosis Society, who has been serving in the Red Cross work at Corpus Christi since the disastrous flood which overwhelmed that city last year, will return to his duties at St. Louis about March 1.

THE railroad fare from St. Louis to New Orleans, where the American Medical Association will hold its meeting April 26-30, will be \$41.06 for the round trip. The return limit expires May 31. The Pullman fare for one lower berth one way is \$4.59; drawing room, \$16.20, for which two railroad tickets are necessary.

THE United States Pharmacopeial Convention will be held at Washington, D. C., May 11. State medical associations and recognized medical schools are entitled to send three delegates and three alternates to the convention. Applications for credential blanks should be addressed to Dr. Noble P. Barnes, Arlington Hotel, Washington, D. C.

SEVERAL communities have written to us that they are in need of a physician. Any member who desires to investigate a new location should communicate with the following: J. H. Steele, general merchant, Cottonwood Point, Mo.; J. T. Peters, cashier, The Williamsburg Bank, Williamsburg, Mo.; Dr. H. V. Pecault, Rosendale, Mo.; J. A. N. Linhardt, cashier, Farmers' Bank of Lohman, Lohman, Mo.; Rebecca Mays, Jerico Springs, Mo.

DR. FRED T. MURPHY, formerly professor of surgery in Washington University Medical School, St. Louis, made a survey of the medical school of Yale University at the request of the Yale Corporation and recently submitted his report with recommendations which the committee of educational policy of the institution used as a basis of recommendations for developing the medical school to the highest type of modern medical teaching, including preclinical and clinical years.

THE Carnegie Corporation of New York has announced its purpose to give \$5,000,000 for the use of the National Academy of Sciences and the National Research Council. A portion of the money will be used to erect in Washington a home of suitable architectural dignity for the two beneficiary organizations. The remainder will be placed in the hands of the academy, which enjoys a federal charter. This impressive gift is a fitting supplement to Mr. Carnegie's great contributions to science and industry.

THE following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

Gilliland Laboratories: Pasteur Anti-Rabic Vaccine-Gilliland; Pneumococcus Vaccine Immunizing-Gilliland.

Eli Lilly and Company: Chloroxyl.

Parmele Pharmaceutical Company: Chinosol and Chinosol Tablets.

E. R. Squibb and Sons: Thromboplastin Hypodermic-Squibb.

Winthrop Chemical Company, Inc.: Veronal-Sodium.

DR. HUGH S. CUMMING has been appointed Surgeon-General of the U. S. Public Health Service to succeed Surgeon-General Rupert Blue, who has served for two terms. Dr. Cumming has been connected with the Public Health Service since 1894, reaching the position of Assistant Surgeon-General in 1919. During the war he was detailed for special duty with the Navy Department and is at present on duty at Constantinople in the campaign for the control of typhus fever. Dr. Blue will continue his connection with the Public Health Service and devote his energies to special investigations.

THE Jackson County Medical Society will honor those of their members who have practiced medicine for a half century, with a dinner at the City Club, Kansas City, on Thursday evening, March 4. Five of their members will be honored: Dr. J. D. Griffith, New York University Medical College, 1870; Dr. John C. Rogers, Washington University Medical School, St. Louis, 1865; Dr. John Wilson, Washington University Medical School, St. Louis, 1866; Dr. John S. Mott, University of Michigan Medical School, Ann Arbor, 1867; Dr. T. R. Thornton, Washington University Medical School, St. Louis, 1868.

THE department of venereal diseases of the state board of health was established Sept. 1, 1919, and its activities were begun on that date by the appointment of Dr. R. L. Russell, direc-

tor. There was available from the Chamberlain-Kahn appropriation by Congress, \$35,000 for the prosecution of this most important work. Among the good features of the venereal disease regulations is the protection of innocent people, which requires those infected to take treatment from the physician of their choice, or at a free clinic. Another good feature of the law is the compulsory provision that physicians treating venereal diseases must report every case by number, the name not being registered for publicity.

FROM *Science* we learn that the American Psychological Association has appointed a committee to formulate standards for the qualifications and certification of practicing psychologists for the United States. The committee consists of Prof. Bird T. Baldwin, State University of Iowa, chairman; Prof. Walter F. Dearborn, Harvard University; Prof. Leta S. Hollingworth, Columbia University; Dr. Helen T. Wooley, Vocational Bureau, Cincinnati, and Dr. Beardsley Ruml, The Scott Company, Philadelphia. State departments of education contemplating the certification of psychologists should consult with a member of the committee. New York, Wisconsin, New Jersey and California recently legalized practicing psychologists.

THE bacteriological equipment of the state board of health was transferred to the Department of Beverage Inspection when the board of health was compelled to abandon its laboratory work on account of lack of funds. Mr. T. S. Mosby, who is director of the Department of Beverage Inspection, has taken advantage of the equipment and for some time has been making bacteriological examinations of sediments and other indications of impurities in beverages and notifying bottlers of the findings whenever there were indications of carelessness or insanitary conditions in the bottling works. Many instances of sediment in the beverage are due to insufficient cleansing of the bottles and the failure to cleanse the bottle-washing machinery. On one occasion the inspector found gas germs, strongly indicating sewer contamination, and on another, insect wings were found.

THE National Board of Medical Examiners conducted an examination at St. Louis on February 18. Seventeen physician, two of them women, took the examination which was held in the Washington University Medical School. The National Board of Medical Examiners was established in 1916, the first meeting being held



at Washington, D. C., when ten candidates were examined, five of whom passed. Since that time eight examinations have been held and 163 candidates examined, 139 of them receiving certificates. The board is a voluntary organization supported by the Carnegie Foundation and its membership includes the Surgeons-General of the Army, Navy and Public Health Service, representatives from the Federation of State Boards and of the profession at large. Only graduates of Class A colleges who have served one year as interns are eligible to take the examination. The certificate of the board is accepted by nineteen states, a license to practice in these states being issued to the holders of these certificates without further examination.

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DR. G. CANBY ROBINSON, dean of Washington University Medical School, St. Louis, has resigned that position and accepted the position of dean and professor of medicine in Vanderbilt University, Nashville, Tenn. The recent donation of \$4,000,000 by the General Education Board to Vanderbilt University and the \$1,000,000 from the Carnegie Foundation given to the school several years ago together with the land and beginning of a hospital valued at \$500,000, place the Vanderbilt University in the position of becoming one of the leading medical institutions of the country. In fact, it is the purpose of the General Education Board to foster the growth of a medical school of the best type in the heart of the South as a contribution to southern medical education. Dr. Robinson is the first one to be appointed on the faculty under this new arrangement and will be largely influential in the reorganization that will necessarily take place. Dr. Robinson will carry from St. Louis the earnest good will of a large number of friends and the faculty and officers of Washington University where he has exhibited an unusual talent for organization and the direction of school work which will stand him in good stead in his new field of activity. He will continue his work at the Washington University until the end of the present school year.

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AMERICAN RED CROSS doctors in charge of the fight against cholera in Poland, when that disease made its appearance in Kowel last January, had a great deal of difficulty in persuading the people to submit to vaccination. Their reluctance amounted at first almost to actual rebellion, and many of them frankly preferred death. The secret of this popular antagonism dates back a few years to a time under the Russian

régimé, when a similar cholera scare alarmed the community. At that time the Russian authorities, determining on vaccination, declared martial law and began forcibly to vaccinate the people. These harsh methods not only aroused popular anger, but were in many cases followed by tragic consequences due to improper sterilization. Many cases of serious infection, loss of limbs, and even of life, resulted. In the end the people rose and threw the Russian military doctor into the town well. The Americans used different means. They started a local educational campaign, using printed posters, and got all the civil and military employees to volunteer to be inoculated. Plenty of vaccine had been brought from Red Cross headquarters at Bialystok, and very soon the popular mind was opened to the dangers of the epidemic and the townspeople began coming in, by twos and threes, and then in crowds. As a result, the threatened epidemic lasted only three days, and only fifteen lives were lost.

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IN almost every community in the United States there is a discharged soldier, sailor, marine, or war nurse, suffering from some injury, or ailment, which dates back to service with the fighting forces. Often this injury or ailment has made it hard or impossible for them to fit in where they did formerly. They are handicapped and need help; not charity, but mental and physical reconstruction. In many cases such people unfortunately keep their troubles to themselves. They are reluctant to seek aid or advice, for fear their friends might consider them weak. Possibly you know such a person. If you do, encourage him to take his troubles to the government. The War Risk Insurance Bureau and the United States Public Health Service are especially anxious to get in touch with such individuals. The Public Health Service has set up a chain of reconstruction bases throughout the country for beneficiaries of the War Risk Bureau. These are not army hospitals, nor is there army discipline in connection with them, but rather a system of hospitals similar to the general hospital in large cities except that the treatment is free and goes much further than in the ordinary hospital. Recreation, vocational training and wholesome entertainment are combined with treatment. While men are being bodily rebuilt they have the opportunity of learning some useful occupation, or pursuing academic studies. They are taught not only to find themselves, but to better their condition. The environment is as homelike as it is possible to make it. A great many men who

went into the army have developed tuberculosis and other diseases requiring special treatment. The Public Health Service has separate hospitals and sanatoriums for these patients, where they may get the best treatment known to medical science. A large number of soldiers are not yet aware that the government offers them free treatment. Please tell them.

## MEMBERSHIP CHANGES, FEBRUARY

### NEW MEMBERS

Arbuckle, Millard F., 415 Lister Bldg., St. Louis.

Barnard, Charles A., Portage Des Sioux.

Clemens, James R., 4915 Argyle Ave., St. Louis.

Custer, Matthews L., 958 Arcade Bldg., St. Louis.

Dickson, James A., 5801 Easton Ave., St. Louis.

Eimer, Charles E., Missouri Baptist Sanitarium, St. Louis.

Foster, Howard M., Missouri Pacific Hospital, St. Louis.

Gebhardt, Albert A., 3438 Chippewa St., St. Louis.

Graham, Evarts A., Washington Univ. Med. School, St. Louis.

Green, Bernard L., 613 Humboldt Bldg., St. Louis.

Hammond, W. D., Humboldt Bldg., St. Louis.

Herron, W. F., Houston.

Isley, Joseph P., Polo.

Jones, Walter M., 5800 Arsenal St., St. Louis.

McCracken, Samuel R., Excelsior Springs.

McGaughey, H. D., Joplin.

Martin, James H., Pilot Knob.

Martin, Solomon C., Jr., 3700 Enright Ave., St. Louis.

Mehan, George T., 312 Nicholas Bldg., St. Louis.

Painter, Albin M., 310 Sharp Bldg., Kansas City.

Plag, Albert E., 800 Carleton Bldg., St. Louis.

Powell, Rudolph V., 529 Frisco Bldg., St. Louis.

Probststein, Jacob, University Club Bldg., St. Louis.

Roach, James F., 807 Carleton Bldg., St. Louis.

Rund, Emmet H., St. Mary's Infirmary, St. Louis.

Shreffler, Algie R., 626 Metropolitan Bldg., St. Louis.

Wittwer, Hugh H., 4123 S. Compton Ave., St. Louis.

### CHANGES OF ADDRESS

Bacon, Martha M., 3733 Highland St., Kansas City, to 1600 Tennessee, Lawrence, Kan.

Bassett, S. T., 5899 Cates Ave., St. Louis, to 2 Beverly Place.

Bedal, Adelheid C., 5098 Washington Ave., St. Louis, to 4254 Lindell Blvd.

Bertram, C. W., Room 1, Commercial Bldg., St. Joseph, to Empire Trust Bldg.

Bird, James B., 2310 Poplar St., Kansas City, to 3940 Agnes Ave.

Compton, James R., 237 S. Jefferson Ave., St. Louis, to 302 S. Jefferson Ave.

Cooper, George F., 638 Lathrop Bldg., Kansas City, to 522 Altman Bldg.

Elmire, J. A., N. E. Cor. 14th and Tracy Sts., Kansas City, to 1300a E. 14th St.

Fowler, Kenneth, St. Louis Children's Hospital, St. Louis, to 4809 Drexel Drive, Dallas, Texas.

Fuhrmann, R. H., 3221 California Ave., St. Louis, to 4247 S. Grand Ave.

Gebhart, O. C., King Hill Bldg., St. Joseph, to 2113 Lovers Lane.

Hatcher, E. D., 6 Westport Ave., Kansas City, to Palmyra.

Hauck, Julius, 3425 Magnolia Ave., St. Louis, to Grand and Arsenal.

Koenig, George H., 650 Century Bldg., St. Louis, to 958 Arcade Bldg.

Koenig, George W., 958 Arcade Bldg., St. Louis, to 740 S. 4th St.

Koon, G. A., Galt to Trenton.

Kramolowsky, H. H., 958 Arcade Bldg., St. Louis, to 5639 Julian Ave.

Kring, R., 2732 S. 13th St., St. Louis, to Koenig Apts., Grand and Victor.

Lawless, Charles L., Napton, R. D. No. 1, to Marshall, R. D. No. 1.

Marr, R. B., Filley to Stockton.

Marriott, W. McK., 4943 Laclede Ave., St. Louis, to 500 S. Kingshighway.

Merriman, C. S., 2511 Forest Ave., Kansas City, to 1225 Rialto Bldg.

Meyers, Henry A., Sedalia, to 503 Security Bldg., Davenport, Iowa.

Moore, Harry M., St. Louis, to Frisco Hospital, Springfield.

O'Kelley, Frank M., 230 Frisco Bldg., Joplin, to Picher, Okla.

Reynolds, William T., 1105 Rialto Bldg., Kansas City, to 307 Shukert Bldg.

Royer, Don J., Joplin, to 409 W. Main St., Fort Wayne, Ind.

Smith, S. T., Neeleyville to Holcomb.

Taylor, Thomas W., 205 Fidelity Bldg., St. Louis, to Marina Bldg.



Terrill, Carlos R., Summerville to Collinsville, Okla.

Vinyard, Robert, St. Louis, to Frisco Hospital, Springfield.

Witten, H. O., Kansas City, to State Hospital, St. Peter, Minn.

RESIGNED

Loving, S. R., Centaur.

Miller, G. W., Joplin.

Stock, George A., West New Brighton, N. Y.

DECEASED

Crumley, Asa C., Wyaconda.

Forsyth, Robert C., Kirkwood.

Freyman, J., Kansas City.

Grant, John M., St. Louis.

Hartwig, Otto A., St. Louis.

Rieger, Earl C., Kansas City.

Thompson, L. M., Nickellton.

## OBITUARY

### CHARLES L. WILSON, M.D.

Dr. C. L. Wilson of Hartville, a graduate of the Missouri Medical College, now the Washington University Medical School, 1888, died at Santa Cruz, Calif., Jan. 2, 1920, from apoplexy, aged 64 years. For a number of years he practiced at St. Louis, where he was in charge of the eye clinic of St. John's Hospital.

### OTTO A. HARTWIG, M.D.

Dr. O. A. Hartwig of St. Louis, a graduate of the Missouri Medical College, 1880, now Washington University Medical School, died at his home, Feb. 4, 1920, aged 78 years. About four years ago he retired from active practice and was elected an honor member of the St. Louis Medical Society of which he had been an active member for many years.

### JOHN I. ELLIS, M.D.

Dr. John I. Ellis of Oak Ridge, a graduate of the St. Louis College of Physicians and Surgeons, 1889, died at his home March 16, 1919, from apoplexy, aged 58 years. Dr. Ellis had practiced at Oak Ridge ever since his graduation and had won the esteem and respect of a large circle of friends and patients. He was a man of fine character and conscientious in the discharge of all duties. He was a member of the Cape Girardeau County Medical Society and the State Medical Association.

### DANIEL KUHN, M.D.

Dr. Daniel Kuhn of St. Louis, a graduate of the Washington University Medical School, 1865, and one of the oldest members of the profession in St. Louis, died at his home, Jan. 13, 1920, after a short illness, aged 83 years. During his active career of fifty-five years in the medical profession Dr. Kuhn practiced in St. Louis, devoting himself chiefly to the diseases of children. He was an honor member of the St. Louis Medical Society with which he had been identified since the early years of his practice, and a Fellow of the American Medical Association.

### JAMES H. BRONAUGH, M.D.

Dr. J. H. Bronaugh of Calhoun, a graduate of the Missouri Medical College, now the Washington University Medical School, 1871, died at his home, Jan. 14, 1920, aged 81 years. For fifty years he practiced medicine in the district surrounding his home and he won a place in the hearts of all who knew him for his kind and gentle spirit and his ready and efficient manner of treating the sick. He was a charter member of the Henry County Medical Society and when feebleness due to advanced years made it impractical for him to attend meetings the society elected him an honor member.

### JOKSHAN FREYMAN, M.D.

Dr. Jokshan Freyman of Kansas City, a graduate of Cincinnati College of Medicine and Surgery, 1877, died at his home, Feb. 13, 1920, aged 74 years. Dr. Freyman practiced at Herman, Mo., for a number of years before going to Kansas City in 1888. He became a member of Jackson County Medical Society in 1905 and was elected an honor member in 1914. He was a Fellow of the American Medical Association and a member of the Masonic fraternity, which took charge of the funeral arrangements. Among the surviving relatives is a brother, Dr. A. A. Freyman of Kansas City.

### EARLE C. RIEGER, M.D.

Dr. E. C. Rieger of Kansas City, a graduate of the University Medical College of Kansas City, 1906, died at his home January 22, from influenza, aged 42 years. Before taking up medicine Dr. Rieger practiced law in Kansas City having been admitted to the bar when quite a young man. Two days after his death his wife died of pneumonia following influenza contracted, it is thought, while nursing her husband.

Dr. Rieger was a member of the Jackson County Medical Society, the State Medical Association and a Fellow of the American Medical Association.

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JOHN M. GRANT, M.D.

Dr. J. M. Grant of St. Louis, a graduate of the Missouri Medical College (now Washington University Medical School), 1889, died at his home, Jan. 29, 1920, from pneumonia, aged 56 years. Dr. Grant was devoted to his profession and worked untiringly in the interest of his patients, giving special attention to surgery. He was a member of the St. Louis School Board when he died and in respect to his memory the board ordered all school work stopped for five minutes during the hour of the funeral services and the flags on the school buildings to fly at halfmast for one week. In 1910 Dr. Grant was attacked by a demented man and shot twice as he was entering his office. He was a member of the St. Louis Medical Society, the State Medical Association and a Fellow of the American Medical Association.

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ERNST F. TIEDEMANN, M.D.

Dr. E. F. Tiedemann of St. Louis, a graduate of Washington University Medical School, 1880, died at his home, Jan. 15, 1920, from an overdose of morphin, aged 58 years. It was not established at the coroner's inquest whether the drug was taken accidentally or with suicidal intent. Dr. Tiedemann was a well known bacteriologist and held the chair of bacteriology in the Marion-Sims Medical College for a number of years and later was professor of the same branch at the Washington University Medical School. Several years ago he was compelled to retire from active work on account of a weakened nervous system and never recovered sufficiently to resume his professional duties. He was a member of the St. Louis Medical Society, the State Medical Association, and a Fellow of the American Medical Association.

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ROBERT C. FORSYTH, M.D.

Dr. R. C. Forsyth of Kirkwood, a graduate of the Missouri Medical College, now Washington University Medical School, 1892, died in a hospital at St. Louis, Feb. 8, 1920, from influenza, aged 40 years. Dr. Forsyth was one of the most popular physicians in St. Louis County and his death is a distinct loss to the medical profession of that section, where he was widely known and universally respected for his pro-

fessional skill and devotion to his patients. It was his unwillingness to neglect the calls of the sick that led to his own breaking down, for he continued to labor with patients even after he himself should have ceased work and cared for his own physical condition. He was a descendant of the early settlers of St. Louis, the first paternal ancestors locating there in 1816. He was a member of the St. Louis County Medical Society and the State Medical Association.

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LOREN L. GRAY, M.D.

Dr. L. L. Gray of Unionville, a graduate of the Northwestern Medical College of St. Joseph, 1884, died at his home, Dec. 20, 1919, from an infected gallbladder and acute pancreatitis, aged 58 years. Dr. Gray was one of the oldest members of Putnam County Medical Society and a Fellow of the American Medical Association. He always maintained a lively interest in the county society and served as a delegate to the state association on several occasions as well as in other official capacities. He was one of the leading citizens in his section of the state, an ardent advocate of the temperance movement, and in the forefront of every step to serve the welfare of the people. His loss will be keenly felt by all physicians in the community among whom he had gained a reputation for integrity and wise and judicious judgment. He was buried by the Masons and Odd Fellows.

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## CORRESPONDENCE

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### DUBIOUS PRAISE

ST. LOUIS, Jan. 26, 1920.

*To the Editor:*—A recently published interview, in which an accomplished sanitarian and local health official discussed the impending outbreak of influenza, was stated possibly in terms not quite his own and which later may have caused him some embarrassment inasmuch as it called forth praise from a source of dubious scientific kind, although this commending writer is of a cult self-designated as being both scientist and Christian, the question raised and under discussion being that of mental influence in the spread of the disease just mentioned.

A considerable body of well-meaning people have through their spokesmen made incursions into the field of scientific hygiene to the undoubted prejudice of effective sanitation and the embarrassment of those officially engaged in that line of work, and it may be said at once before justifiable criticism is offered, that there is an entirely legitimate field for all the benevo-



lences such a body may be able to exercise in the upbuilding of moral character, strengthening the power of will, saving from themselves those who feel driven or tempted to offenses against life, health, morals or property—in short, lending a hand to the weak, the unfortunate, the despairing, or unemployed.

A grain of sand, a flake of snow, a drop of rain, taken singly may seem of slight importance but human experience tells of the tremendous destruction very often wrought by such insignificant particles when acting in mass formation. Caravans and armies have been overwhelmed by sandstorms in the desert, leaving no trace behind; in mountainous regions heavy losses of life have been caused by snowfalls and avalanches; densely peopled countries have been desolated by floods, but the sum total of all such losses of human life by these inanimate agencies, for a considerable period of time was exceeded last year by the millions of deaths caused by the activities of the microscopic germ of influenza, and its microbic allies and auxiliaries.

Faith, will, thought, wish, desire, mental influence, were powerless to stay the march of this infection around the world, spread as it was by infected persons to those susceptible. It was even shown by authenticated report that wild monkeys in the forests of Africa died by the thousands of influenza, the disease having been received by them from their human neighbors—the white man having infected the native peoples.

Leaders in the pious denomination indicated have not been so venturesome as to assail the verity of human destruction by natural, visible means of violence; but, with studied and wilful blindness, have rested on a footing of science falsely so-called, in effect flouting the demonstrations made of the minute forms of life that constitute the efficient agencies of communicable diseases among men. This truth has been established on unshakable scientific foundations by the labor of skilled workers, trained in every line of such research, in civil and military fields, at the bedside, in laboratories, colleges, hospitals and dispensaries.

Many of the fantasies and futilities paraded by uninformed or reckless people concerning disease would become harmless if it were remembered that the appearance of influenza, typhoid, tuberculosis and the like, is the outcome of just as orderly natural processes as is the production of a crop of cabbages, corn or cotton. Longtime study and experience has enabled man to suit to these staple crops conditions of soil fitted to produce the largest yield—his expert knowledge invoking the aid of a multitude of minute organisms that are helpful to such vegetation. But it has only been within recent years that exact science has identified these relatively few forms of microscopic life that are harmful to man, discovered the laws of

their growth and being, and devised means and measures that in advanced countries have practically paralyzed, if not wholly overcome, smallpox, yellow fever, bubonic plague, typhus and typhoid fevers, diphtheria and other maladies.

To disregard the teachings of recognized biologic science and sane bacterial knowledge, when human health and life are at stake, argues a state of mind that invites general calamity, and such an attitude must in reasoned sanitary judgment be held contraband of public health and an obvious menace to common weal—in fact, it should be held unforgivable when the means for sound instruction on such matters are everywhere freely available by those who may wish to learn them undeterred by pride of pious opinion or former beliefs now no longer rationally tenable.

Pious faith can stop neither bullets nor bacteria; given proper conditions of seed, soil, season and surroundings and forms of hostile microbic life will gain pandemic powers, and the effect of their mass attack on man will exceed in mortality that of every other known natural cause by reason of their power of self-multiplication. As established by scientific research the avenues of invasion are commonly the air passages and the alimentary tract, and enlightened sanitary science directs defensive measures in accordance with the known laws of microbic life and growth; for it would be as reasonable to say of a prairie fire, driven by the wind, that it was caused by mental influence as to so speak of the pandemic flame that, within a period of about eighteen months, has scorched all the people of the world—whether of Christian faith, heathen faith, or no faith at all.

The Galilean teacher, in discourses on religious faith and honest purpose, showed remarkable common sense by illustrating such themes with pictures drawn from every day life, the facts of nature that were well known to all, the natural science of that time being freely used for teaching purposes. Therefore, it may be conceived that if the microscope had been known 2,000 years ago, with its revelation of myriad forms of life otherwise unseen and unknown, the Great Physician would have drawn from that fruitful source lessons illuminating religious doctrine, moral principle, ethical standards, spiritual insight, honest mentality and the like, taught at that time with such convincing clearness and effect. But there still seem to be those who choose to walk in darkness, speaking a strange tongue, content to know nothing of the advances made by scientific medicine in the arrest of disease and saving of life, nor as to the means by which this has been done—all of which achievements rightly hold a foremost place in the glories and distinctions that have marked this age of the world.

GEORGE HOMAN, M.D.

## MISCELLANY

### TRACHOMA SURVEY

Dr. W. P. Raynor, of the United States Public Health Service, has prepared a preliminary report on the prevalence of trachoma among school children in certain counties in Missouri which is presented here for the information of our members. The report follows:

Place	Institution	Number Examined	No. Cases Trachoma	Per Cent. Trachoma
Butler County				
Poplar Bluff.....	East Side School....	225	24	10½
	Benton School.....	168	9	5½
	Central School.....	489	16	3¾
	West End School....	150	10	6¾
Quilin .....	Public School.....	27	5	18½
Neeleyville .....	Public School.....	28	6	21½
Dunklin County				
Kennett .....	Public School.....	34	4	12
Carter County				
Van Buren.....	Public School.....	160	14	8½
Clear Spring.....	Public School.....	33	6	18
Fremont .....	Public School.....	90	9	10
New Hope.....	Public School.....	18	1	5½
Hunter .....	Public School.....	82	0	0
Shannon County				
Eminence .....	Public School.....	248	23	9¼
West Eminence.....	Public School.....	32	2	6¼
Dewes .....	Public School.....	27	3	11
Nunsell .....	Public School.....	17	1	6
Low Wassie.....	Public School.....	34	1	3
Ripley County				
Doniphan .....	Public School.....	227	7	3
	Loan Star School..	15	4	26¾
	Towles School.....	16	2	12½
Oak Grove.....	Public School.....	19	2	10½
Stilwell .....	Public School.....	26	5	18½
Naylor .....	Public School.....	195	17	8¾
Cape Girardeau County				
Cape Girardeau Co.				
	Washington School..	221	27	12
	Lorimer School.....	342	25	7¼
	Jefferson School....	265	17	6½
Jackson .....	Public School.....	349	18	5
Alleyville .....	Public School.....	75	15	20
Stoddard County				
Dexter .....	Public School.....	493	44	9
Bloomfield .....	Public School.....	149	17	11½
Puxico .....	Public School.....	185	15	8

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1920

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

- Webster County Medical Society, Dec. 1, 1919.
- Madison County Medical Society, Dec. 2, 1919.
- Livingston County Medical Society, Dec. 31, 1919.
- Schuyler County Medical Society, Jan. 9, 1920.
- Benton County Medical Society, Jan. 23, 1920.
- Camden County Medical Society, Jan. 28, 1920.

### MISSOURI STATE MEDICAL ASSOCIATION

Sixty-Third Annual Session, Jefferson City, April 6-8

#### PRELIMINARY PROGRAM

Vilray P. Blair, St. Louis, "Operative Treatment of Cancer of the Tongue"; S. P. Child, Kansas City, "Social or State Medicine"; M. H. Clark, Kansas City, "The Present Status of Nitrous Oxide Anesthesia"; M. B. Clopton, St. Louis, "New Growths in Children"; W. T. Coughlin, St. Louis, "Artificial Anus"; Ellis Fischel, St. Louis,

"Use of Radium in Cancer of the Face, Jaws and Oral Cavity"; C. B. Francisco, Kansas City, "Recent Observations on Perthe's Disease"; John J. Gaines, Excelsior Springs, "Five Years' Experience with Stock Vaccines"; John Green, St. Louis, "Treatment of Dacryocystitis by Curettage"; W. W. Hoyt, St. Louis, "Bone Tuberculosis: Surgical and Sociological Aspects"; R. D. Irland, Kansas City, "Peripheral Nerve Injuries"; Ralph A. Kinsella, St. Louis, "The Interpretation of Bacteriological Evidence, Especially in Influenza and Infections of Unknown Etiology"; William E. Leighton, St. Louis, "Inoperable Carcinoma"; Maurice J. Lonsway, St. Louis, "Feeding of Athreptic Infants"; E. G. Mark, Kansas City, "Surgery of Gonorrhea in the Male"; L. A. Marty, Kansas City, "Modern Treatment of Malignancies"; Lindsay S. Milne, Kansas City, "Influenza Pneumonia"; F. C. Neff, Kansas City, "The Physical Examination of the Infant"; Quitman U. Newell, St. Louis, "Retroversion of Uterus"; Frank G. Nifong, Columbia, "A Plea for a Missouri State General Hospital Affiliated with County Hospitals and Completed Medical Education in Missouri University"; G. Wilse Robinson, Kansas City, "Diagnosis of Peripheral Nerve Injuries"; R. L. Russell, Jefferson City, "Missouri's Fight Against Venereal Disease"; Major G. Seelig, St. Louis, "Abdominal Surgery"; William H. Stauffer, St. Louis, "Relation of the Proctologist to Group Diagnosis"; J. Edgar Stewart, St. Louis, "Tuberculosis of the Hip"; Charles A. Stone, St. Louis, "Treatment of Spinal Tuberculosis in Children"; H. S. Valentine, Kansas City, "Traumatic Aneurysm"; John Zahorski, St. Louis, "Summer Diarrhea in Infants."

Since the above has been prepared the following members have notified the program committee of their desire to read papers but have not given the titles: W. D. Hammond, St. Louis; V. W. McCarty and J. A. Lea, Kansas City; Ernest F. Robinson, Kansas City; Charles F. Sherwin, St. Louis; W. H. Schutz, Kansas City; C. H. Suddarth, Excelsior Springs.

### ST. LOUIS MEDICAL SOCIETY

Annual Meeting, Jan. 6, 1920

The meeting was called to order at 9 p. m. by the president, Dr. William Engelbach. After Dr. Hamel's motion that the report of officers and committees be published in the *Bulletin* without reading, was adopted, Dr. Engelbach delivered an address on the activities of the society during the year 1919, and introduced the president-elect, Dr. Cyrus E. Burford, who was escorted to the chair by Drs. A. H. Hamel and J. C. Morfit. Dr. Burford then delivered his inaugural address.

Dr. William Kerwin was appointed to escort Dr. Jules M. Brady, first vice president, to the rostrum. Dr. W. C. Gayler, second vice president, was absent, and secretary-elect, Dr. Arthur Gundlach, was ill.

The chair announced the newly elected councilors: William Engelbach, William T. Coughlin, M. F. Engman and Emmett P. North, and the newly elected delegates to the Missouri State Medical Association: Drs. Robert E. Schlueter, William H. Mook, Charles H. Neilson, W. C. G. Kirchner, Elsworth S. Smith, Albert F. Koetter, Emmett P. North, William H. Vogt, G. Canby Robinson.

The entertainment for the evening consisted of the following:

Mrs. Carroll Smith sang "Oria from Le Nozze di Sigaio," by Mozart, and "Morning," by Oley Speaks, accompanied by Mrs. Carl J. Luyties.

Mrs. William Kerwin sang "Good-Bye," by Tosti, accompanied by Mrs. Clinton Elder.

Dr. Engelbach moved that a vote of thanks be extended to the entertainers. Seconded and carried.

Attendance 150.

ALBERT F. KOETTER, M.D., Secretary.



## Meeting of January 13

The meeting was called to order at 8:40 p. m. by the president, Dr. Cyrus E. Buford, and the following papers were read:

"Paralysis Agitans," by Dr. David S. Booth.

Discussion by Drs. Given Campbell and Marc Ray Hughes, Dr. Booth closing.

"Adenomyoma in the Broad Ligament," by Dr. Otto Schwarz.

Discussion by Drs. G. D. Royston and John C. Morfit; Dr. Schwarz closing.

"Pneumoperitoneum," by Dr. John L. Tierney.

Discussion by Drs. William Engelbach, George Ives and John C. Morfit; Dr. Tierney closing.

Attendance 102.

## Meeting of the Council January 14

The meeting was called to order by the chairman, Dr. Cyrus E. Buford. The minutes of the previous meeting were read and approved.

Permission was given the Washington University Alumni Association to erect a memorial tablet to the late Dr. Justin Steer in the hall.

Dr. D. Buie Garstang of Los Angeles was elected corresponding member.

The following were elected by transfer: W. D. Hammond from the Jersey County (Illinois) Medical Society; M. F. Arbuckle from the St. Clair County (Illinois) Medical Society; James F. Roach from the Hamilton County (Illinois) Medical Society; Jacob Probst from the Chicago (Illinois) Medical Society; J. R. Clemens from the Omaha-Douglas (Nebraska) Medical Society.

Dr. Smith moved that a vote of thanks be extended to Dr. Koetter for his work as editor of the *Bulletin* for the past two years. Seconded and carried.

The secretary reported that the Walter Reed Post No. 136 of the American Legion had asked if the auditorium could be rented for less than the regular price, and was instructed to notify them that as the price charged for rental of the auditorium was the actual cost of heating and lighting the building it could not be rented for less.

The following applicants for active membership were elected: James A. Dickson, 5801 Easton Avenue; Charles E. Eimer, Missouri Baptist Sanitarium; Howard M. Foster, Missouri Pacific Hospital; Albert A. Gebhardt, 3438 Chippewa Street; Bernard L. Green, Washington University Dispensary; George T. Mehan, 312 Nicholas Building; Emmet H. Rund, St. Mary's Infirmary; Hugh J. Wittwer, 4123 South Compton Avenue; Solomon C. Martin, Jr., 3700 Enright Avenue.

ARTHUR GUNDLACH, M.D., Secretary.

## PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

## Sixty-Third Meeting, Monday, Dec. 8, 1919.

## 1. EXHIBITION OF CASES. A. A CASE SHOWING THE BROWN-SEQUARD SYNDROME.—By DR. J. M. STANTON.

The patient, a male, aged 26, was admitted to the Barnes Hospital, service of Dr. S. I. Schwab, on reference from the United States Public Health Service. The patient's past history is uneventful. In August, 1918, while in France with the A. E. F., he was stabbed in the back with a curve-bladed pruning knife. He immediately fell to the ground and was paralyzed below the waist. He was removed to a hospital and for about ten days was incontinent. Muscular power gradually returned in the left leg and in three weeks recovery was practically complete. After six or seven weeks he began to move the toes of the right foot. His strength has gradually returned, and at the present time he is able to walk without any support.

Examination shows a small healed scar one-half by one centimeter just to the right of the fifth dorsal spinous process. The cranial nerves and the upper extremities show no abnormality. There is a marked paresis of the right leg, of the upper neurone type. Strength in the left leg is normal. The patient walks without support, but with a semi-spastic gait on the right. The right knee and Achilles jerks are markedly increased. There is patellar and ankle clonus on this side. Plantar irritation on the right causes extension of the great toe. On the left the knee and Achilles jerks are reduced and there is no pathologic toe sign.

The most interesting abnormalities are, however, in the sphere of sensation. On the right side, in the region of the sixth spinal segment, there is a questionable band of hypesthesia. The entire right leg is hyperesthetic (according to the patient). On the left side from the eighth spinal segment downward, and extending irregularly up almost to the mid line, there is loss of sensation to pin prick and to heat and cold. Tactile sensation in this area is normal. The area of loss to pin prick is slightly greater than to heat and cold. Deep pressure, muscle-joint and vibratory sense is normal in both legs.

The blood Wassermann is negative as is also the spinal fluid examination and the spinal fluid Wassermann. Roentgenographic examination of the spine shows no foreign bodies. The findings in this case all point to the existence of a partial hemisection of the spinal cord in the upper dorsal region, eighth spinal segment, which is the result of a stab wound.

## DISCUSSION

DR. SCHWAB: This case is really a beautiful physiologic experiment in surgery. This man's cord was hemisected by a sharp knife. In going through the vertebral canal it probably cut the posterior nerve root at that segment going through the pyramidal tract on that side, and evidently stopping there. The function of the cord was for the moment completely paralyzed. The recovery from spinal shock cleared up the injured side completely and left the cut through the cord as a permanent result. The symptoms resulting from this caused the clinical picture of Brown-Sequard paralysis.

The sensory findings are of interest. It is well to remember that there are only two functional pathways going up the cord which remain uncrossed: those of deep sensibility and those concerned with coordination running in the direct cerebellar tract. The patient improved so much that operation was not seriously considered.

DR. SACHS: About two years ago we had a similar case with almost identical findings. The lesion was higher up. A knife blade was taken out of the cord. The blade was in the dura. In that case the symptoms were due to hemorrhage around the cord, so we opened the dura and took the knife blade out and saw exactly how much injury there was. There was no injury to the cord. The knife blade lay parallel to the cord. It had cut only the root but had not injured the cord. The only explanation is that there must have been a hematoma that gave this picture.

## 2. HETEROPLASTIC BONE FORMATION — WITH REPORT OF A CASE—OSSIFICATION IN THE FALLOPIAN TUBE.—By GOICHI ASAMI.

In the course of routine examinations of specimens removed at operations a well formed bone was found in the wall of the Fallopian tube. A careful study of the history failed to show any evidence of a previous tubal pregnancy. The wall of the tube was chronically inflamed and there were several foci of calcium deposits in the hyaline connective tissue areas. There was also found typical osteoid tissue in the neighborhood of the bone. Several islands of cartilages were

found degenerative while others were undergoing ossification. It is therefore natural to suppose that there are two distinct processes involved in the bone formation in the present case. In the first place, the bone is formed through the osteoid tissue, as in a membranous ossification. In the second place, we have an endochondral ossification. The history is negative as regards the possibility of tubal pregnancy with the subsequent resorption of all the embryonal tissues except bone-forming ones. Furthermore, the distribution of bone spicules and cartilages in the wall of the tube was so wide-spread as to make this possibility a very faint one. Another possible explanation is the hypothesis of embryonal misplacement. Aberrant bones were found in the wall of the aorta, stomach wall, in the calcified nodules in the lung and elsewhere. Furthermore, a few investigators were able to produce bone in kidneys, and in the wall of the aorta under experimental conditions. These conditions were the necrosis, the calcium deposit, and the proliferation of the fibroblasts and blood capillaries around the calcium deposit. Evidently the embryonal misplacement is not a factor in the aberrant bone formation.

It is here assumed from the histologic and clinical evidences that neither one of the above explanations holds. All the factors that have been considered essential in the metaplastic process in which the fibroblasts, under the chemical influence of the calcium salts, become transformed into osteoblasts are present in this case. The bone found in this case therefore is considered to be the result of the metaplasia. Certain factors concerned in the metaplastic processes are not yet clearly worked out, but are left for an experimental study which is now well under way.

#### DISCUSSION

DR. OPIE: The presence of bone in the Fallopian tube suggest problems of much interest with reference to bone formation. Aberrant bone formation of this kind usually occurs in association with deposits of calcium. There is little to suggest that it is an embryonic displacement of osteoblasts. Most of those who have studied the formation of bone in the walls of sclerotic blood vessels have assumed that cells capable of forming bone are derived from connective tissue by a process of metaplasia.

DR. BROOKS: The bone formation in this case is interpreted as heteroplastic. A considerable amount of experimental work has been done in attempts to stimulate connective tissue to produce bone. Some experimenters have believed that this was accomplished. I have not been convinced that such is possible. The so-called bone formation in arteries and in kidneys after complete occlusion of the renal vessels may not be true bone, but only calcification with an architecture similar to bone.

DR. LOEB: There can be no doubt that a metaplasia of calcified material into bone is possible, even if this material did not originate in bone. In such cases invading connective tissue becomes ultimately converted into bone. Whether in Mr. Asami's case such a metaplasia occurred or whether we have to deal in this case with a misplaced embryonal rest cannot be decided with certainty. However, the fact that it is possible to note a partial bone formation even within the walls of larger blood vessels makes it probable that in this case we have to deal with a metaplasia rather than with an embryonal misplacement.

### 3. SPECIFIC IMMUNOLOGIC GROUPING OF BACILLUS, INFLUENZA.—By DR. JAMES C. SMALL AND MR. G. K. DICKSON.

The object of this work was to ascertain if there was any relationship between the various strains of *B. Influenzae*. This work was commenced in March, 1919, after the influenza epidemic. The strains used

in our work were isolated from as many sources as possible; from normal individuals who gave no history of the disease; from influenza patients in the St. Louis City Hospital and from the dispensary of Washington University School of Medicine. From the various strains isolated we used ten strains in our work.

The organisms were isolated on brown blood media, which is composed of neutral meat infusion agar to which 5 per cent. of rabbit's blood is added while the agar is above 90° C. Throat cultures were taken and planted on plates and incubated for twenty-four hours. From these plates the organism was obtained in pure culture. Ten rabbits were immunized with the ten strains of influenza.

Ten rabbits were injected with the ten strains of influenza, each rabbit receiving one strain, agglutinating tests being run at intervals during the process of the immunization to determine the titre of the rabbit.

Antigens were prepared from the ten strains to be used in the agglutinating tests.

The results of agglutination, cross agglutination, and absorption tests show that the ten strains of influenza may be grouped into four groups. It is noted that Strain No. 7 is omitted in the grouping due to the fact that an antigen could not be prepared from Strain No. 7, but the immune serum is related to Strain No. 6, as it agglutinates that antigen.

#### RESULTS

Group No. 1.—Strains No. 1, 8 and 9.

Group No. 2.—Strains No. 2, 3, 5 and 10.

Group No. 3.—Strain No. 4.

Group No. 4.—Strain No. 6.

Conclusion: That bacillus influenza can be grouped by immunologic methods. (2) That four groups have been demonstrated.

#### DISCUSSION

DR. OPIE: The organisms employed in this investigation were not obtained at the time of the influenza epidemic, but in most instances they were obtained from cases having the symptomatology of influenza. In other instances they were obtained from the mouths of healthy individuals. We cannot draw conclusions from this study concerning the etiology of influenza, but should an epidemic occur, it would be of great importance to determine what relation the groups which have been defined bear the similar micro-organisms associated with the disease.

### 4. ADENOMYOMA OF THE OVARY.—By DR. OTTO SCHWARZ.

Adenomyoma is a frequent pelvic tumor; it occurs chiefly in the uterus as a diffuse growth infiltrating the uterine wall; it also occurs not infrequently in the recto-vaginal septum. It can occur in any pelvic organs including the sigmoid. In the ovary it is a rare condition. Uterine mucosa and smooth muscle, which are represented in adenomyoma, have been described in the ovary only in a few instances. Russel, in 1898, described a case; this is one of the earliest in the literature. Pick, in 1905, described four of his own cases, and mentioned that five authors have reported cases previous to his time. Russel and Pick both traced their growths to the germinal epithelium of the ovary.

My observation was in an ovary  $5\frac{1}{2} \times 4 \times 2\frac{1}{2}$  cm.; the ovary was grayish yellow in color, markedly wrinkled; here and there were bluish black areas over which the surface was very thin. On transverse section the ovary contained four cavities, all filled with bloody material; one was a Graafian follicle, the other a small corpus luteum. The two remaining cavities were about one-half cm. in diameter and were lined by typical uterine mucosa surrounded by a layer of smooth muscle; both cavities contained blood, which had a chocolate brown color, and was partially clotted.



## DISCUSSION

DR. LOEB: I have had an opportunity to see Dr. Schwarz's specimen. There is no doubt that we have to deal with uterine mucosa and muscle layer situated in the cortex of the ovary. The uterine epithelium is continuous with and gradually passes into the ovarian germinal epithelium. It is of interest that the uterine mucosa dips deeply into the ovarian tissue. In this respect the uterine tissue is similar to the first Anlage of the Muellerian ducts. During embryonic development the mesothelium likewise dips down into the surrounding mesenchyme. It is possible that this malformation owes its origin to a retardation in the differentiation of the mesothelium at a critical period in its development, before it had fully differentiated into mesonephros, germinal epithelium and Muellerian ducts. Such an interpretation would be in agreement with the findings of Stockard and others concerning the experimental production of duplicities. However, we cannot entirely exclude the possibility that the uterine tissue represents an aberrant cellnest cut off from the Muellerian ducts during embryonal development. As in the case of Mr. Asami, isolated observations such as these do not usually permit a definite interpretation as to the mode of origin of these structures.

DR. TAUSSIG: Anyone who has sectioned ovaries has been struck with an occasional find of small quantities of material which resembled uterine mucosa but only rarely does one encounter definite layers. Special interest from a clinical standpoint is the relationship of these findings to cases of ovarian pregnancy. Dr. J. Clarence Webster of Chicago has claimed no pregnancy can develop except on Muellerian tissue. Whether it be misplaced Muellerian tissue or tissue developing as Dr. Loeb has described, it seems not unlikely that the rare cases of pregnancies developing in the body of the ovary are to be attributed to such presence of uterine mucosa.

DR. OPIE: In this nodule of the ovary there is muscular tissue and glandular tissue. It is the prevailing custom of pathologists to designate these lesions adeno-myomata. With many adeno-myomata there is development of glandular tissue from uterine mucosa into the muscle and the organ is very much enlarged but maintains the usual outline. It may be questioned whether the nodular lesion described by Dr. Schwarz is a tumor or should be regarded as misplaced embryonic tissue and the same question might be asked concerning so-called adeno-myomata.

#### 5. ARTIFICIAL PNEUMOPERITONEUM IN THE ROENTGEN-RAY EXAMINATION OF ABDOMINAL CAVITY AND ITS CONTENTS (PRELIMINARY REPORTS).—By DR. SHERWOOD MOORE AND DR. T. C. REIDFERN.

I wish to present the plates of two cases of artificial pneumoperitoneum, and a brief abstract of the literature dealing with that subject.

In 1902, Kelling conceived the idea of direct examination of the pleurae with a cystoscope and later used the same instrument for direct examination of the liver and other abdominal organs with gas injection. It has long been known that exposure of the abdominal contents to the air was a beneficial procedure in tuberculosis of the peritoneum. Godwin of England has made use of this fact, injecting oxygen into the abdominal cavity without doing a laparotomy. He states that the best results follow this operation and has never seen ill effects. The most comprehensive article found is by Goetz in the *Munich Medz. Wochs.*, 1918, giving the results of ninety cases of his own, describing the technic for introducing the gas, giving the indications and contraindications, and pointing out the results that may reasonably be expected of the method. He stresses the fact that the most important point is the introduction of the gas without injury to the viscera.

He uses a very complicated apparatus with a manometer to measure the negative pressure within the abdomen and also to measure the pressure of the gas introduced. There is a negative pressure within the abdomen increased during expiration and this causes the intestines to stick closely to the point of the needle, as soon as it enters the abdominal cavity. In using an ordinary lumbar puncture needle, this difficulty may be overcome in two ways. By having gentle pressure of air or normal salt solution in the intestine, which will push the intestinal coil from the point. I have in mind a special cannula, the modification of the one used by Goetz. It consists of a cannula which is pointed with sharp edges through which passes a blunt point fenestrated obturator. This obturator is actuated by a spring in such fashion that it does not project during the passage of the cannula through the abdominal wall, but on entering the peritoneal cavity, the blunt obturator is forced forward, guards the cutting edge of the cannula and protects the intestines from injury. In selecting a point for insertion of the needle for injecting an effort is made to introduce it where the peritoneum is most closely adherent to the abdominal wall. This has been found to be about 3 to 5 cm. below the level of the umbilicus and in the middle of the left rectus muscle. The bladder and bowels should be empty before the injection is made. From three to five liters of filtered oxygen is used with patient supine, and this amount gives no discomfort; four liters were completely absorbed in fourteen days. Contraindications: The only ones mentioned are acute peritoneal inflammation, meteorism, and disturbance of respiration and circulation.

In our own cases, no effort was made to measure the amount of air introduced, but rather reliance was placed on sensations of the patient, and the obliteration of the liver dullness. We used filtered air and believe it to be just as satisfactory as oxygen, and much simpler to inject. Both of our cases had ascites and an ordinary trocar and cannula was used. After withdrawing the fluid the cannula was left in place and the air pumped in with a reverse Potain aspirator. The patients were immediately taken to the roentgen-ray room, fluoroscoped and plates were made. They were examined daily for four days, and as the fluid had reaccumulated to such an extent that tapping had again to be resorted to, the air was let out with the fluid. We were not able to see any lessening of the air content at the end of this time. We think this method will be particularly helpful in diagnosing certain conditions within the abdomen, such as, splenic tumors, new growths of the liver and gall bladder, carcinomatosis, cirrhosis, tumors of the stomach and intestines, diaphragmatic hernias and tumors of the genital organs in the female and the urinary organs. We think that this method can be advantageously combined with the barium meal, and thus show both the parenchymatous and hollow organs at the same time. In *Annals of Surgery* for July, 1919, Stein and Stewart of New York have a short article and they have reached the same conclusions. They use a lumbar puncture needle and oxygen, and claim that the oxygen was absorbed within twenty-four hours. They reported no ill effects whatever. Before puncturing these cases we first tried it in animals and several dead bodies. In no instance was I able to injure the intestines with the needle and I believe that with proper care, it is a harmless procedure.

The contents of the abdominal cavity differ so little in density from each other and from the inclosing walls that this differentiation by means of the roentgen ray can be secured only by the agency of contrasting substances either adventitiously present (gallstones) or artificially introduced. Until recently these examinations were confined to hollow organs permitting the introduction of contracting media. The roentgen-ray examination of abdominal structures is hence restricted to the gastro-intestinal tube and urinary tract,

and even there the information to be gained is concerned only with the inside of the structures. Very little knowledge is to be obtained regarding the surrounding organs. Induced pneumoperitoneum seems to promise to largely overcome these restrictions and widely extend the field of usefulness of the roentgen-ray investigations of the abdominal cavity. Another important field of usefulness is that of the study of the living anatomy of the abdomen. Gastro-intestinal roentgen-ray work revolutionized the conception of the anatomy of the stomach and intestines. Perhaps an equally great change can be wrought in the present ideas concerning the other abdominal viscera.

#### DISCUSSION

DR. GRAHAM: I think that Dr. Moore deserves credit for bringing this subject before us. It is one of the newer methods of diagnosis which may be very promising. There are one or two points in connection with it which have interested me considerably.

Recently an article by Dandy appeared in the *Annals of Surgery* describing the application of this same principle to the diagnosis of perforated typhoid ulcer. In this doubtful case of perforation, fluoroscopic examination showed gas between the diaphragm and the liver, and because of this finding it was felt that there must be free gas or air in the abdominal cavity and that, therefore, a perforation had occurred. This diagnosis was verified at operation.

It seems to me that if suitable mechanical apparatus can be devised so that it is safe for the patient, this method might serve to clear up the diagnosis in many doubtful cases of perforations of ulcers, not only typhoid, but also perhaps duodenal and gastric ulcers.

I am interested in Dr. Moore's trochar and I would not wish to discredit it, but nevertheless, it seems to me that if the intestine is adherent to the abdominal wall, the needle will almost surely puncture it, and if it is not adherent to the abdominal wall, there is almost no danger of puncturing it with the needle. I, therefore, fail to see the advantage in the obturator device.

DR. MOORE, Closing: We did not try air injection on cadavers—only the puncture. I do not know all of Dr. Redfern's reasons for the choice of this needle. Avoidance of injury to viscera is the point that every one makes who has injected air, and I do not see that the needle would be much of an assurance against wounding the intestine.

#### CAPE GIRARDEAU COUNTY MEDICAL SOCIETY

The society met in called session at Cape Girardeau, Dec. 11, 1919, for the principal purpose of electing officers for the year 1920. The following were present: Drs. Wichterich, Howard, Seabaugh, Hope, Yount, Wilson and Cunningham. The minutes of the last meeting were read and approved.

The secretary reported that Dr. E. E. Higdon, formerly of Allenville, had been transferred by request to the Madison County Medical Society, he having located at Fredericktown.

The 1920 dues of Dr. R. T. Henderson of Jackson were ordered paid out of the funds of the society, Dr. Henderson being one of the pioneer practitioners of this county and for many years an active member of this society. Having retired from practice the society, in honor of his faithful and untiring work in the past, is carrying him as an honor member.

The election of officers for the year 1920 resulted as follows: President, O. L. Seabaugh, Cape Girardeau; vice president, A. E. Dalton, Cape Girardeau; treasurer, G. W. Walker, Cape Girardeau; secretary, J. W. Berry, Cape Girardeau; delegate, G. W. Vinyard, Jackson; censor for three years, Paul R. Williams, Cape Girardeau. The legislative committee appointed consisted of D. H. Hope, J. D. Porterfield and W. E.

Yount, to have authority to act on all things coming up for action at any time.

It was ordered that the censor audit the books of the secretary and treasurer. The present censors are D. H. Hope, one year; G. W. Vinyard, two years; Paul R. Williams, three years.

H. L. CUNNINGHAM, M.D., Secretary.

#### Meeting of January 12

Cape Girardeau County Medical Society met in regular session in the Commercial Club Rooms, Cape Girardeau, Dr. O. L. Seabaugh presiding. After the regular order of business had been transacted, a very interesting paper was read by Dr. J. D. Porterfield and discussed by Dr. D. H. Hope, on "Facts About the Gallbladder." The reading of this paper and a live discussion by all members present made the evening a very instructive and enjoyable one for all.

This was a very live meeting and the society expects to have at least twelve such meetings during the year 1920, since the program committee has pledged themselves to furnish live programs and have something of interest at every meeting during the year.

Our meeting for February 9 promises to be one of much interest, the subjects of papers being "Focal Infection from Tonsils, Teeth and Nasal Sinuses," by Dr. H. L. Cunningham; "Roentgen-Ray Diagnosis," by Dr. G. W. Walker. The meeting will be held at Cape Girardeau, February 9, at 8 p. m., in Commercial Club Rooms.

J. W. BERRY, M.D., Secretary.

#### CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in Harrisonville, Dec. 11, 1919, at 1:30 p. m., with the following members present: Drs. A. R. Elder, president; H. S. Crawford, secretary; Overholser, Long, Ramey, Triplett and Yeagle.

Only two of the authors on the program were present, as follows: "Tonsil and Focal Infections," Dr. J. S. Triplett, and "The Tonsil as an Infective Agent," Dr. R. P. Yeagle. Both of them had splendid papers on the subjects, and it is very much regretted that the other members with papers on branches of the same subject were not present.

Dr. Fred E. Dargatz of Belton was elected to membership.

The election of officers for the year 1920 resulted as follows: President, R. P. Yeagle; first vice president, R. D. Ramey; second vice president, J. S. Triplett; secretary-treasurer, H. S. Crawford; member of board of censors for three years, R. D. Ramey; delegate to State Association for two years, R. P. Yeagle; alternate, A. R. Elder.

H. S. CRAWFORD, M.D., Secretary.

#### GRUNDY COUNTY MEDICAL SOCIETY

At a meeting held at the Elks Club, Trenton, Dec. 9, 1919, the Grundy County Medical Society elected the following officers for 1920: President, G. W. Belshe, Trenton; vice president, H. L. Lowry, Trenton; secretary, O. R. Rooks, Trenton; treasurer, W. D. Fulkerson, Trenton; delegate, Bertha E. Sheetz, Trenton; alternate, W. H. Winningham, Trenton; censor for three years, J. B. Wright, Trenton.

O. R. ROOKS, M.D., Secretary.

#### MARION COUNTY MEDICAL SOCIETY

The Marion County Medical Society met at Hannibal on Friday evening, February 6, and spent the time discussing interesting phases of disease, treatment, and prophylaxis.

Those present were: Drs. J. W. Hardesty, president, in the chair; Hornback, Hill, Waldo and Ross.

MARY S. ROSS, M.D., Secretary.



**ST. LOUIS COUNTY MEDICAL SOCIETY**

The society met at Clayton, January 14, and was called to order at 8:45 p. m. by the president. Present: Drs. Prichard, Miles, Denny, W. T. Townsend, Jones, J. H. Armstrong, Sudduth, Sutter, Dunnivant, Eggers, Koch, Conway. The minutes of the previous meeting were read and approved.

The application for membership of Dr. Irene Blanchard of Webster Groves was read and referred to the board of censors.

A letter from Dr. S. Rush Loving of Centaur was read in which the doctor stated that on account of advancing age and feebleness he had retired from active practice and offered his resignation as a member of this society. By motion, unanimously carried, the secretary was instructed to write the doctor asking him to remain with the society as a life honorary member without dues.

On motion duly carried the president was instructed to appoint a committee to investigate the by-laws of the society as to whether any revision was needed and report their recommendation at the next meeting of the society. The president appointed on this committee Drs. Jones, W. T. Townsend and Conway.

The president announced the following as his appointees on the committee on public health and legislation: Drs. Sudduth, Denny and J. H. Armstrong.

A most interesting paper was read by Dr. Koch on his experiences while in the United States Army in this country and in France. The paper was followed by questions on different points brought out in the paper and a general discussion, particularly on influenza, followed.

Dr. Sutter, health commissioner for University City, asked the society to go on record as to the proper period of quarantine to be enforced following scarlet fever. After a discussion of the question it was the consensus of opinion that it would be best to have a meeting called of all the different health commissioners in the county and city of St. Louis to discuss the question and agree on uniform regulations.

Dr. Armstrong asked if it were not possible to make and enforce regulations in regard to the proper ventilation of street cars passing through the county. This question was also regarded as a proper one to come before the proposed meeting of health commissioners and Dr. Eggers, the county health commissioner, was asked to present it.

A. CONWAY, M.D., Secretary.

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## BOOK REVIEWS

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**SURGICAL CLINICS OF CHICAGO**, December, 1919. (W. B. Saunders Co.).

This number completes Volume 3 and maintains the standard of excellence established at the beginning of this helpful periodical. There are numerous cases from clinics in a number of the principal hospitals in Chicago interestingly described and liberally illustrated. A complete index makes reference to all articles published in the volume readily accessible.

**THE MEDICAL CLINICS OF NORTH AMERICA**. New York Number. September, 1919. Philadelphia: W. B. Saunders Company.

This volume consists of numerous cases from the clinics of Dr. W. T. Longcope at the Presbyterian Hospital and cases from a dozen other New York clinics. The clinical lecture on radium therapy by G. S. Willis at the Postgraduate clinic is enlightening, and Dr. Longcope's discussion of several cases of purpura hemorrhagica demonstrating hemorrhages into the brain and cord as one of the rare manifestations of this disease, is exceedingly interesting. The volume comprises 270 pages and is liberally illustrated.

**TOXINES ET ANTITOXINES**. Par M. Nicolle, E. Cesari, C. Jouan, de l'Institut Pasteur. Masson et Cie, Editeurs, 120 Boulevard Saint-Germain, Paris. Price, 5 francs net.

This work is a résumé of the classical work of the authors on the above subject and it based on some thirty-five original contributions covering a period of twenty years. The work started with Nicolle's description of a method for the preparation of diphtheria antitoxin in 1896.

Briefly, the contents, which are condensed into 116 carefully written pages, includes: a description of the principal characteristics of toxines; the effects of soluble toxines; the effects of solid toxines; immunity and sensibility to toxines; varieties of toxines; antibody mechanism, and general conception of toxines and antibodies as regards their nature, mode of action and genesis of antibodies.

As previously stated the book is concise and well written and deserves a place in the library or the laboratory of all who are interested in this fundamental subject of modern medical research. R. L. T.

**THE DISEASE OF INFANTS AND CHILDREN**. By J. P. Crozer Griffith, M.D., Ph.D., professor of Pediatrics in the University of Pennsylvania. Two octavo volumes totalling 1542 pages, with 436 illustrations, including 20 plates in colors. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, \$16 net.

J. P. Crozer Griffith is one of the best known pediatricists and teachers in this country. His book will therefore find a large circle of interested readers among his old friends as well as among students in general.

This two volume edition on pediatrics contains a large amount of reading matter. The type is "solid" but of clearly readable size. The side headings make for ease and rapidity of reading. In general, one must commend the citations of authors quoted at the foot of each page, which makes it of great value as a work of reference. Likewise to be commended is the index at the back of each volume.

The first chapter is devoted to the anatomy and physiology of childhood. The weight and size of a few organs are compared for the various ages, but it is to be hoped that in future editions data for all the important viscera at the different ages may be given. This would fill a long felt want because of the absence of such data from our books in English.

The first volume treats of the feeding and dietary of children at the various ages, of the therapeutics in early life, the diseases of the newborn, the infections, the general and nutritional diseases, and the diseases of the digestive system. A new feature is the illustration in colors of frequently observed infants stools. Diarrheal and intestinal disorders are very simply classified and briefly treated, thus eliminating the confusing and unnecessarily long chapters which are found in most books.

Volume II is not so large. In it are considered the diseases of the respiratory, circulating, genitourinary, and nervous systems, diseases of the skeleton, blood, glands, skin, eye, and ear. Figures 306 and 307 are good representations of the appearance of the patient with congenital disease of the heart. It has taken authors a long time to recognize the clinical importance of pyelitis, but this book has given a fairly complete treatment of the subject.

As far as the reviewer has been able to see, no subject has been overlooked in this work on pediatrics, although necessarily the consideration of many subjects is brief.

To anyone wishing a larger and more general work on pediatrics, this work of Griffith is recommended. F. C. N.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1919, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**ICHTHYOL.**—An aqueous solution, the important medicinal constituents of which are ammonium compounds containing sulphur in the form of sulphonates, sulphones and sulphides. These products result from the sulphonation of the tarlike distillate obtained from the bituminous shales found near Seefeld in the Tyrol. Ichthyol is weakly antiseptic and mildly irritant. It is used locally on the supposition that it will secure the absorption of swellings and effusions in contusions, burns, etc., and especially in gynecologic practice and in various skin diseases. Ichthyol has been tried internally in a great variety of conditions, but its therapeutic value in many of its suggested applications has not been fully established. Merck and Co., New York (*Jour. A. M. A.*, Jan. 3, 1920, p. 30).

**VERONAL-SODIUM.**—A brand of barbitol sodium complying with the N. N. R. standards. For a discussion of the actions and uses of barbitol sodium, see New and Nonofficial Remedies, 1919, p. 83. The Winthrop Chemical Company, Inc., New York.

**PROCAINE-CALCO.**—A brand of procaine complying with the N. N. R. standards. For a discussion of the actions and uses of procaine, see New and Nonofficial Remedies, 1919, p. 30. The Calco Chemical Company, Boundbrook, N. J.

**TYPHOID-PARATYPHOID BACTERIN (SPECIAL BACTERIAL VACCINE No. 13).**—Marketed in 5 Cc. vials, each cubic centimeter containing 1,000 million killed *B. typhosus*, 750 million killed *B. paratyphosus* "A" and 750 million killed *B. paratyphosus* "B." For a discussion of typhoid vaccine, see New and Nonofficial Remedies, 1919, p. 292. E. R. Squibb and Sons, New York (*Jour. A. M. A.*, Jan. 3, 1920, p. 31).

**MERCUROCHROME-220.**—A preliminary report of the Council on Pharmacy and Chemistry discusses the experimental status of this new germicide for use in the genito-urinary tract. While the lack of confirmatory evidence of its value does not permit more than a tentative acceptance, the available data may be sufficient to warrant its use by physicians, provided its experimental therapeutic status is recognized. Mercurochrome-220 (marketed by Hynson, Westcott and Dunning, Baltimore) is stated to be dibromoxymercury fluorescein. It is a red powder, insoluble in water but soluble in alkalis. According to Young, White and Swartz, Mercurochrome-220 is a strong and rapidly acting germicide which penetrates the tissues readily and is tolerated in 1 per cent. solutions by the bladder, renal pelvis and urethra. Only temporary discomfort is caused when a 2.5 per cent. solution is applied to the anterior urethra. Its toxicity is high, but no systemic effects have been observed following its local application (*Jour. A. M. A.*, Jan. 3, 1920, p. 31).

**CHINOSOL.**—Oxyquinolin Sulphate.—Chinosol is a powerful, nontoxic antiseptic, somewhat stronger than mercuric chloride and considerably stronger than phenol. It is a feeble germicide, being weaker than phenol and much weaker than mercuric chloride. Chinosol is claimed to have marked analgesic power and to be an efficient deodorant. Chinosol is also marketed in the form of Chinosol tablets 0.25 Gm. Parmele Pharmacal Company, New York.

**DUBOIS' IODOLEINE.**—Iodized poppyseed oil. An iodine addition product of poppyseed oil. Dubois' Iodoleine may be used whenever iodides are indicated, its effects being more gradually exerted. It is supplied as Dubois' iodoleine capsules 0.25 Cc., equivalent to 0.1 Gm. iodine, Dubois' iodoleine injectable, containing 30 per cent. iodine, and Dubois' iodoleine injectable ampules, equivalent to 0.3 Gm. iodine. David B. Levy, New York (*Jour. A. M. A.*, Jan. 10, 1920, p. 104).

**THYROXIN.**—4, 5, 6-trihydro-4, 5, 6-triiodo- $\alpha$ -oxy- $\beta$ -indole propionic acid. An active principle obtained from the thyroid gland. Thyroxin is used essentially for the same purposes as Dried Thyroids, U. S. P. It is indicated in some cases of diminishing or absent thyroid functioning, such as simple goiter, cretinism or myxedema. Thyroxin is supplied *only* in the form of tablets for oral administration, containing, respectively, 0.2, 0.4, 0.8, and 2 Mg. of thyroxin. E. R. Squibb and Sons, New York.

**THROMBOPLASTIN HYPODERMIC-SQUIBB.**—A sterilized extract of cattle brain in physiological solution of sodium chloride. It complies with the description of thromboplastin-Squibb, but a longer time is required for the clotting of blood plasma. It is intended for hypodermic and intramuscular injection to increase the coagulability of the blood. E. R. Squibb and Sons, New York (*Jour. A. M. A.*, Jan. 10, 1920, p. 105).

### PROPAGANDA FOR REFORM

**NAMES FOR PHENOLPHTHALEIN.**—The following is a partial list of names under which phenolphthalein and phenolphthalein preparations and combinations are or were advertised: Alophen, Cholelith Pills, Elzernac, Ex Lax, Exurgine, Laxophen, Laxine, Laxiconfect, Laxothalen Tablets, Paraphthalein, Phenalein, Phenolax Wafers, Phenolphthalein Laxative, Probilin, Prunoids, Purgatol, Purgen Konfect, Purgella, Purglets, Purgo, Purgolade, Purgotin, Purgulum, Phuphen, Thalosen, Veracolate, Zam Zam. What a Babeldom would arise in medical practice if this business policy of manufacturers to present their products by coined names were encouraged by the patronage of physicians. Self-respecting manufacturers owe it to the progress of medical science to do away with such camouflage for revenue only and the medical profession owes recognition to these manufacturers by prescribing products by their scientific names (*Jour. A. M. A.*, Jan. 3, 1920, p. 29.)

**"ANTIPNEUMOCOCCIC OIL" AND CAMPHOR IN PNEUMONIA.**—The Council on Pharmacy and Chemistry reports that "Antipneumococcic Oil" (a solution of camphor in oil, sold by Eimer and Amend, New York) is ineligible for New and Nonofficial Remedies because (1) the recommendations for its use in pneumonia are not warranted by the evidence; (2) the name is not descriptive of the composition, but therapeutically suggestive, and (3) the sale of a solution of camphor in oil under a name non-descriptive of its composition is unscientific and a hindrance to therapeutic progress (*Jour. A. M. A.*, Jan. 3, 1920, p. 46).

**More Misbrandings.**—George L. King, Kingfisher, Okla., was prosecuted by the federal authorities because the therapeutic claims for "King's Kidney Remedy" were false and fraudulent. The United States Drug Manufacturing Company, Philadelphia, was prosecuted by the federal authorities because a number of its tablets were found not to contain the amount of drug claimed. The John H. Casey Medical Company, Hillyard, Wash., was prosecuted by the federal authorities because "Casey's Rheumatic Cure—The Great Montana Remedy" was sold under false claims of composition and of therapeutic properties. Joseph McManus, doing business under the name of Philadelphia Capsule Co., Philadelphia, was prose-

(Continued on advertising page xxii)



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(Continued from page 136)

cuted by the federal authorities because some of the products sold were misbranded, or adulterated, or both (*Jour. A. M. A.*, Jan. 10, 1920, p. 121).

**SINGLETON'S EYE OINTMENT.**—This is a British nostrum. The chemists of the British Medical Association in 1909 reported it to be principally a mixture of lard and Japan wax and purified coconut oil, with 4 per cent. of beeswax and 7.4 per cent. of red mercuric oxid (*Jour. A. M. A.*, Jan. 17, 1920, p. 193).

**KLINE'S NERVE RESTORATIVE.**—In 1915, the A. M. A. Chemical Laboratory reported, of this alleged epilepsy remedy, that essentially each 100 Cc. of the solution contained approximately 8.7 gm. ammonium bromid, 9.2 gm. potassium bromid and 8.0 gm. sodium bromid. Calculated from the bromid determination, each meal-time dose contained the equivalent of 17.2 grains of potassium bromid (*Jour. A. M. A.*, Jan. 17, 1920, p. 193).

**APOTHESINE.**—This is an efficient local anesthetic manufactured by Parke, Davis and Co. It belongs to the procain rather than to the cocain type, that is, while efficient for injection anesthesia, it is relatively inefficient when applied to mucous membranes. The Council on Pharmacy and Chemistry reports that exception was taken to certain claims of efficiency, safety, etc., and that it sent these objections to Parke, Davis and Co. The firm apparently was unwilling or unable to submit evidence for the claims that had been questioned: nor did it offer to modify the claims themselves. Apthesine is, therefore, ineligible for inclusion in New and Nonofficial Remedies. It will, however, be listed in the "Described but Not Accepted" Department of New and Nonofficial Remedies (*Jour. A. M. A.*, Jan. 24, 1920, p. 265).

**DIAL "CIBA."**—This is a hypnotic sold by A. Klipstein and Co., Inc. Chemically, it is closely related to barbital (veronal). The Council on Pharmacy and Chemistry reports that it has not been accepted for New and Nonofficial Remedies because unwarranted claims are made for the product. As it might be made eligible for N. N. R. if the misleading therapeutic claims were eliminated, the Council directed that Dial "Ciba" be included with articles "Described but Not Accepted" so that physicians might be informed with regard to its character and properties (*Jour. A. M. A.*, Jan. 24, 1920, p. 266).

**VLEMINKX' SOLUTION.**—This solution, used by Dr. W. A. Pusey for verrucae, is a solution of oxysulphuret of calcium. It is in the National Formulary as Liquor Calcis Sulphuratae and is made by boiling together water, lime and sulphur (*Jour. A. M. A.*, Jan. 24, 1920, p. 268).

**SKEEN'S STRICTURE CURE.**—For some years, a concern in Cincinnati which has gone under the name "D. A. Skeen" and "The D. A. Skeen Co." has advertised a mail order treatment that was "guaranteed" to cure stricture or enlarged prostate. Now the postal authorities have denied the use of the U. S. mails to this concern and its manager, George B. Poole. The product was found to be essentially a solution of ferric chlorid in alcohol and water (*Jour. A. M. A.*, Jan. 31, 1920, p. 340).

**PNEUMO-STREP SERUM.**—In an Advertisement of Pneumo-Strep-Serum, the Mulford Company, by going beyond our present knowledge, carries misleading inferences. If the "Pneumo-Strep-Serum" had the virtues with which the advertisement inferentially endows it, this product would have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies. It has not been so accepted, although many other biologic products of the same manufacturer have been (*Jour. A. M. A.*, Jan. 31, 1920, p. 342).

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### ORIGINAL ARTICLES

#### PNEUMOPERITONEUM \*

JOHN L. TIERNEY, M.D.  
ST. LOUIS

When our interest was first attracted to the use of pneumoperitoneum as a means of visualizing certain intra-abdominal organs, we were under the impression that the method was a comparatively new one; but, to our surprise, an investigation of the literature disclosed the fact that a large amount of work had been done in this interesting field.

As Stein and Stewart remark in their able article, the priority in the use of inflation of the peritoneal cavity for diagnosis must be given to Kelling, who employed this method of inspecting the abdominal contents in 1902. In 1910, Jacobaeus, of Stockholm, adopted this method, and in 1913 published two articles concerning direct thoracoscopy and laparoscopy by the use of a cannula and endoscope.

With this remarkable initial work in intra-abdominal and intrathoracic observation under inflation, it was but a short time until roentgenological procedures were adapted to the method, and Weber in 1912 demonstrated that many of the intra-abdominal viscera could be visualized by this method. In this same year Lorey, in a case of ascites, was able, by the introduction of air and nitrogen, to visualize the contours of the spleen and liver.

Rautenberg was one of the earliest workers to undertake systematic and extensive observations by this method. Writing in 1914, he states that his observations had begun in 1913, and that previously Lorey, of Hamburg, on the suggestion of Brauer, attempted this method after puncture for ascites in cirrhosis of the liver, and that Weber, of Kieff, had discussed this

method in a purely theoretical way, and had experimented on animals and the cadavers of children. Moreover, Rautenberg asserts that the introduction of air into the abdominal cavity was attempted at an earlier time by Kelling, of Dresden, to diagnosticate abdominal diseases by means of the cystoscope, in a manner similar to Jacobaeus, who later had diagnosticated diseases of the pleura after air inflation by means of the cystoscope. Rautenberg's earlier work was confined entirely to cases complicated by ascites, but soon afterward he began investigations in cases without fluid. In 1914, he demonstrated his work before the Congress of Internal Medicine at Wiesbaden, and in 1916 lectured upon this subject before the Berlin Medical Society. In his early work he used an ordinary pneumothorax apparatus and an abdominal trocar, but later an ordinary bellows pump and needle. His sites of puncture were in the median line, between the umbilicus and the symphysis, or between the ensiform and the navel. He accentuates the necessity of thoroughly emptying the intestinal tract and bladder as a preliminary measure; and, writing in 1919, with five years' experience, is very definite in the statement that the procedure is not only simple but perfectly harmless. The first three years of his work were confined almost entirely to observations on the diaphragm, liver and spleen, but his later work embraced observations on other intra-abdominal viscera and pathology. He states that a better picture of the spinal column can be obtained when the individual, whose peritoneal cavity has been inflated, is turned upon one side, permitting the intestines to fall away.

Meyer-Betz, writing in 1914, accentuated the value of the method in determining the starting point of intra-abdominal tumors.

In 1918, Goetze, in an attempt at differential diagnosis between certain diaphragmatic and gastric conditions, evolved this method, totally independently, judging from his article, of previous observations. However, he states that a search of the literature revealed Rautenberg's work, but he makes no mention of the data that had been compiled even previously to Rauten-

\* From the Medical Service of Drs. Engelbach and Tierney, St. John's Hospital.

\* Read before the St. Louis Medical Society, Jan. 13, 1920.

berg's efforts. Despite Rautenberg's statement, in 1914, that his work was not confined entirely to cases with ascites, Goetze maintains that Rautenberg's work was confined to ascites and that this author had advocated the procedure only in that condition, quoting him to this effect. Reporting 75 cases in June, 1918, Goetze accentuates the lack of danger, but appears unduly solicitous about pushing away interfering viscera, and advocates that this be accomplished by means of a solid, a gaseous or a fluid medium. He evolved a rather complicated automatic needle, but remarks that an ordinary puncture needle would suffice. He speaks of a jet of oxygen or of physiological salt solution being passed through a needle at the time of puncture, to facilitate the pushing away of interfering viscera. His site of election in puncture is the middle of the left rectus, 3 to 5 cm. below the navel, or under the costal margin, in the center of the rectus, outside the liver border: his reasons for selection being that at these points the peritoneum is more closely attached and prevents the possibility of a properitoneal emphysema. He introduced 1 to 3 liters of oxygen, without discomfort, in the lying position, but remarks that, on the assumption of the upright position, there was frequently pain referred to the shoulders, due to a visceral pull upon the diaphragm. He gives as contraindications to the method: respiratory or circulatory disturbance, meteorism, acute inflammations of the peritoneum, and obliteration of the peritoneal cavity by adhesions. He observes in July, 1918, that out of 90 cases, one-fourth had been ambulatory, in which he had permitted the gas to escape, and that the procedure had been without danger.

In February, 1919, the late Prof. Schmidt, of Bonn, gave Goetze credit for being the originator of a new method for the roentgen examination of the abdominal organs. He states that after witnessing the initial undertakings of Goetze, he returned to Bonn and immediately introduced the method in his clinic, and reported his experiences. He states that he used ordinary air, on account of the difficulty in securing oxygen, and that it very rarely produced infection in the thoracic or peritoneal cavity. He used the artificial pneumothorax apparatus, but did not believe that it was necessary, an oxygen bellows pump being adaptable. He gave no attention to the amount of oxygen introduced, in actual measurement, but introduced sufficient to produce a slight convexity of the abdomen, maintaining that a tense convexity should be avoided on account of the air-pressure upon the capillaries. He used an ordinary blunt needle for the puncture. The article is well illustrated, demonstrating many interesting intra-abdominal

conditions. He states the superiority of this method of demonstrating the spleen over Henszelman's method of demonstration by air inflation of the colon.

For puncture, Schmidt selected the region below the navel, slightly to the side of the median line, so as to secure a muscular closure, but mentioned the fact that other points might be selected, if the liver, spleen and adherent viscera were avoided. He permitted the needle to remain in position, so that later air might be advantageously permitted to escape. He also mentioned the pain referred to the shoulders when the subject assumed the upright position. He visualized the stomach and colon by filling these viscera with air from Seidlitz powders or rectal injection.

Alessandrini, reporting 40 cases in May, 1919, advocates the reclining position, as contrasted to the semi-seated position adopted by Goetze in many of his cases. He uses an ordinary pneumothorax needle, going through the rectus and transverse fascia, above the umbilicus and below the liver dulness. He uses a manometer, and after the fascia has been traversed, injects a small quantity of oxygen and is able to determine from his manometric reading whether or not the tip of the needle is in the peritoneal cavity. He feels that the amount of oxygen should be measured, and uses from 500 c.c. to 3,000 c.c. He extracted it afterward in one case because of dyspnea. He accentuates the value and harmlessness of the procedure.

Regarding the use of pneumodiagnostic methods in this country, probably the earliest observations, so far as we have been able to determine in the literature, were made by Lockett and Stewart, who demonstrated the ventricles of the brain in a case of skull fracture which had permitted air to enter.

Dandy used this method as a diagnostic procedure in the localization of intracranial tumors and the visualization of hydrocephalic ventricles, and suggests the possibility of the visualization of spinal cord tumors. He uses both the intraventricular and intraspinal methods. He withdraws a certain amount of fluid and injects an equal amount of unsterilized air, the injection varying in amount from 20 c.c. to 120 c.c., depending upon the pathology. He accentuates the harmlessness in a number of cases, but sounds a note of warning that spinal puncture should never be done in the presence of tumor unless the intracranial pressure has been previously relieved by ventricular puncture. Following the injection, he leaves the needle open so that the intraspinal pressure may become equal to the atmospheric, which, being less than the normal intraspinal pressure, reduces the possibility of untoward reaction.



Reverting to pneumoperitoneum proper, Stein and Stewart, of New York, in an article published in July, 1919, give a good review of the literature and describe their technic, the point of puncture being 2 or 3 inches to the left of the umbilicus, and about 1½ inches below it. They accentuate the simplicity and reproduce a series of very instructive roentgenograms. They also make mention of the fact that Bainbridge, of New York, had been using the intraperitoneal injection of oxygen since 1903 for overcoming negative abdominal pressure and the prevention of recurrent adhesions. They state that this method is not a competitor of the opaque meal method, but that the conjunction of these two methods would prove valuable.

Dandy, writing on pneumoperitoneum in September, 1919, accentuates the value of roentgen diagnosis in perforation of the alimentary canal. He states that in induced pneumoperitoneum, hydrogen should theoretically be the ideal gas, because its molecular weight is the lowest. At the time of this communication accentuation was made of the value of the method in perforation of the intestinal tract and the localization of gas within the peritoneal cavity. A number of experiments had been made on dogs, but at that time no intraperitoneal injections of air had been made in human beings.

Rosenblatt, in September, 1919, reports one case of pneumoperitoneum accidentally induced in attempted artificial pneumothorax. His conclusions are that the procedure should be without danger. The technic similar to that for producing artificial pneumothorax should be followed, using a manometer to indicate when the needle is in the peritoneal cavity. He makes some observations on intra-abdominal pressure, and refers the reader to Haven Emerson's exhaustive article.

Emerson, in his work on intra-abdominal pressure, concluded that excessive pressure artificially produced within the peritoneal cavity caused death in animals from cardiac failure, before the obstruction to respiratory excursion had developed a marked asphyxia, stating that pressure as high as 45 c.c. of water in the abdomen will usually kill a small animal (cat or rabbit) by fatiguing the diaphragm, as well as by diminishing the venous return to the heart (allowing asphyxia).

Peschmann and Corper, in 1917, reported observations on intraperitoneal injection of air in their studies on tuberculous peritonitis in rats. Their conclusion was that there were no visible alterations in the peritoneum or abdominal organs, even after inflations repeated at three- or four-day-intervals for a period of sixteen weeks.

Moore reports an interesting case of accumulation of air and fluid in the upper right quadrant.

Orndoff reports over 100 cases of induced pneumoperitoneum, using air, oxygen or nitrogen. He uses a tank of oxygen, water-bottle indicator, pressure gauge (graduated in millimeters), and ordinary spinal puncture needle. His site of puncture is one calculated to avoid pathology. He uses no anesthetic, except pressure, and advocates lysol and glycerine (equal parts) as a local antiseptic. He also accentuates the simplicity and tremendous value of the procedure, giving numerous illustrations demonstrating clearly the diagnostic possibilities.

Stimulated by the conclusions of previous workers and struck by the simplicity of this method and the remarkable field of information opened up in the roentgen diagnosis of the abdominal cavity and its viscera, we adopted the procedure on the service of Drs. Engelbach and Tierney at St. John's Hospital, in November, 1919; and our experience to date, some 40 cases, leads us heartily to confirm the simplicity, harmlessness, and tremendous diagnostic value of the method. Our procedure is as follows:

First, the apparatus is one devised by Dr. H. H. Turner, resident physician of the hospital, consisting of a stand, containing an oxygen tank, a water bottle, a manometer (graduated in millimeters), and a sterile cotton filter. The water bottle, through which the oxygen passes, serves as an indicator to the rate of flow. The manometer (graduated in millimeters) serves as an indicator to the amount of pressure exerted through the needle, giving valuable information as to whether or not the tip of the needle is within the peritoneal cavity. The sterile cotton filter, although probably unnecessary, is an added safeguard in the prevention of possible peritoneal infection. The needle used is an ordinary blunt lumbar puncture needle, such as may be found in the ordinary packets of anti-meningococcic serum.

The patient is placed in the reclining position upon a table before the vertical fluoroscope, in which position the puncture is done. We have insisted upon absolute sterility and careful operative technic. The entire abdomen is exposed, sterilized with tincture of iodine, and covered with a laparotomy sheet. The operator is clad in sterile gown and gloves. No particular attention has been paid to a site of puncture, our only care being to avoid the underlying viscera and pathology. The site having been selected with these points in mind, the superficial area is anesthetized with a 2 per cent. apothecene solution. The small needle is then discarded, and the needle to be used for the actual inflation is inserted, and, with a small syringe attached, anesthetization is carried down to the peritoneum. After some experience in this matter, the position of the needle can definitely be determined by the sense of touch, there being a clear sense of resistance in

traversing the fascia and then the peritoneum, somewhat similar to the digital sensation experienced in puncturing the dura. When the operator is confident that the needle is in the proper position, the hose connection is made and the oxygen turned on. If the needle is completely patent, when the oxygen is first turned on, the manometer needle usually jumps to between 20 and 40 mm., and if the flow is perfectly free, that is, if there is no interposed tissue and the tip of the puncture needle is within the peritoneal cavity, the needle immediately returns to zero, remaining at this point and thus indicating whether or not the needle is in the proper position. In case the oxygen is infiltrating into the tissue, producing, for instance, a properitoneal emphysema, the manometer reading will remain around 40 mm., or perhaps rapidly rise, depending upon the degree of resistance and the rate of flow. In one or two instances a properitoneal emphysema of a moderate degree was produced, although this was quickly determined by the manometric reading. To prevent this, the suggestion of Goetze to puncture at the points of closest attachment of the peritoneum might be heeded. With the needle safe in position, the flow is permitted to proceed at a slow, even rate, until a slight convexity of the abdomen is produced. Frequently, at this point, the degree of inflation is determined by a fluoroscopic observation. With the patient in the reclining position before the vertical fluoroscope, a transverse view is possible, showing clearly the separation of the abdominal wall from the visceral contents, which form the floor, and which we have termed "the visceral line." When it is judged that the inflation is sufficient, the needle is withdrawn and the routine fluoroscopic examination is proceeded with.

The intra-abdominal oxygen tends to seek the highest level, and for this reason the position of the patient is changed, depending upon which viscus it is desired to visualize. The first reading is made in the transverse position, which demonstrates clearly any adhesions between the underlying viscera and the abdominal wall, these appearing as thin or thick connecting strands. Definite connection can be further demonstrated by pressing upon the abdominal wall above and observing the viscus drop away with the release of tension upon the connecting adhesion. The patient is then turned on the left side, facing the fluoroscope; then on the right side; which procedures bring into successive view the right diaphragm, liver, right kidney, portions of the stomach, colon, left kidney, spleen, and any pathological tumefaction that may be present. By raising the patient's head, the organs of the upper abdomen may be better visualized. By raising the pelvis, in a partial Trendelenburg position, the under surface of the liver, the gall-

bladder region, and the female pelvic organs may be visualized and photographed. The patient is then transferred to the horizontal fluoroscope, turned on the face, and observations are made in this position. These observations bring out definitely practically all the solid viscera, and, moreover, the various hollow viscera may be visualized by inflation. We have inflated the stomach by the use of Seidlitz powders, and the colon by the rectal injection of air. It is possible to visualize the bladder, the thickness of its wall, intravesical tumefactions, and so forth, by distending the bladder with oxygen or air. The patient may be placed in the upright sitting or standing position before the fluoroscope, this method, however, frequently being productive of severe pain in the shoulders, due to visceral pull upon the diaphragm. By this method, it has been possible clearly to visualize the diaphragm, the subdiaphragmatic areas, the existence of adhesions between the liver and the diaphragm, the gallbladder region, the contour and size of the spleen, kidneys, stomach and colon, and the female internal genitalia; also such diagnoses as echinococcus cyst of the liver and acute yellow atrophy have been made. Inflation of the stomach has given a clear-cut outline of both stomach and duodenum, with particular reference to the thickness of the walls. We feel that this may prove to be a better method for the determination of early carcinomatous infiltrations than the present opaque meal method.

When this routine fluoroscopic observation is completed, permanent records desired are taken in various positions calculated to accentuate the various viscera. These, perhaps, may be better taken on duplitized films, which may be adapted to the contour of the body.

It had been our custom to keep the patient in the reclining position and transfer him to his bed without permitting him to assume an upright position, thus hoping to avoid diaphragmatic pull and consequent shoulder pain. Recently, however, it has been our custom to extract the air by means of a specially devised needle and an ordinary suction pump, such as is used in the laboratory for the cleaning of pipettes. For this purpose, a special needle was devised by taking a lumbar puncture needle, cutting off a distal 3 mm. of the needle proper, and sharpening the stylet to a trocar point, thus producing a small trocar of the type usually used in the aspiration of joints. This is inserted through the original puncture without further anesthetic. The stylet is withdrawn, leaving a perfectly blunt needle within the peritoneal cavity. The suction apparatus is then attached, and under fluoroscopic observation practically all of the intraperitoneal oxygen



may be extracted. We have found that after this procedure, it is possible to permit the patient to assume the upright position absolutely without any untoward effect. We believe this to be an important observation, because it indicates that this procedure may be adapted to office practice, permitting the patient to return

distention and to the possibility of shoulder pain on assuming the upright position.

Our observations to date have been confined largely to the normal. We feel that a thorough appreciation of this fact is essential, because it will be necessary to change our norms and standards, since with the intraperitoneal injection of oxygen there is a definite displacement of the various viscera. These norms, however, are readily established, and differences in size, shape, contour, relative densities, etc., are easily appreciated.

#### CONCLUSIONS

1. The technic is exceedingly simple, the requirements being an adequate apparatus, a proper needle, surgical cleanliness, local anesthesia, and avoidance of the underlying viscera and pathology.

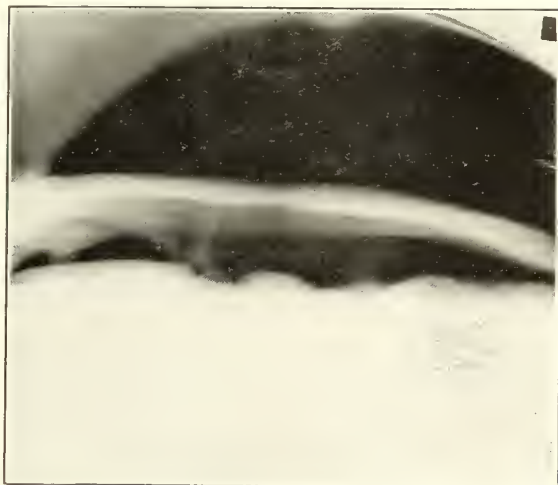


Fig. 1.—Pneumoperitoneum, dorsal position, transverse view (Dr. Schnobelen), looking from side to side through the abdomen. Upper light line represents anterior abdominal wall; lower broken line represents the underlying intraperitoneal viscera, which line we have termed the "visceral line." The intervening dark area represents the oxygen content. The smooth projection in the upper portion is the liver; the hazy triangular shadow extending from the liver to the anterior abdominal wall represents a normal peritoneal ligament.



Fig. 2.—Pneumoperitoneum, dorsal position, transverse view, showing a dense narrow band of adhesions in the gallbladder region and a definite defect of the abdominal wall with a small projecting umbilical hernia.

to his ordinary activities after the operation. If the oxygen is not withdrawn by artificial means, it is almost completely absorbed within twenty-four hours, as demonstrated by plates; nevertheless, the patient is subjected to some discomfort for perhaps twelve hours, due to a sense of



Fig. 3.—Pneumoperitoneum, dorsal position, transverse view (Dr. Schnobelen), showing postoperative adhesions. Omentum above and a broad adhesive band running up to old scar which is visualized in the lower anterior wall, probably intensified by the presence of a silver filigree.

2. The procedure is harmless. This assumption is based upon the fact that in some 400 recorded cases there have been no untoward results. It is conceded that oxygen is not injurious to the peritoneum. Reasonable care being exercised, there should be no danger of puncturing underlying solid viscera or pathological tumefactions. It is highly improbable that the needle ordinarily used, or even a sharper instrument, would pierce the underlying intestine unless it should be adherent to the parietal wall, in which case contamination of the cavity could not occur. Not only is the injection of oxygen into the abdominal cavity not harmful, but, as Bainbridge has long advocated, it is of decided benefit in postoperative conditions, lessening shock and postoperative nausea and vomiting, and successfully preventing the recurrence of adhesions.

3. The procedure has remarkable diagnostic possibilities, more advantageously secured by the fluoroscope, but nevertheless adapted to film or plate work. The following structures and their relationship to other viscera may be shown: the diaphragm, the subdiaphragmatic areas, the liver, perihepatitis, adhesions to the diaphragm, the kidneys, the spleen, adhesions of the intestinal coils to the parietal peritoneum, omental fixation, the female internal genitalia, and certain pathology, such as fibromyomata of the uterus, ovarian tumors, etc. By means of additional air injection, the stomach, the duodenum, gastromural infiltration, the thickness of the walls, the colon, the bladder and intravesical papillomata, etc., may be demonstrated.

4. In work which we have just initiated we have been able to demonstrate, by the intrave-

ticularly if the oxygen is withdrawn after the operation, make it extremely feasible in ordinary routine diagnostic procedure, and that, because of its intrinsic worth, it should have a wider application.

7. We have begun observations by means of direct laparoscopy, using pneumoperitoneum



Fig. 4.—Pneumoperitoneum, dorsal position, transverse view. Postoperative adhesions, perigastric and pericholecystic, extending from underlying viscera to anterior wall.

nous injection of oxygen in dogs, not only a more definite contour of the heart, but the chambers as well, showing definitely the atrio-ventricular septa and the thickness of the auricular and ventricular walls. It is a far cry, perhaps, but at some time in the future it may be possible to demonstrate excrescences and vegetations on the valves themselves. With the intraventricular and intraspinal injection of air, it is possible to visualize the ventricles, certain cisternæ and cerebral sulci, and, by changed relations, to localize intracranial and intraspinal neoplasms.

5. The most important contraindication to this method is any acute inflammation of the peritoneum. Other contraindications, as Rautenberg observed, are respiratory or circulatory disturbances, meteorism, and obliteration of the peritoneal cavity by adhesions.

6. We feel that the simplicity, the diagnostic value and the harmlessness of the technic, par-



Fig. 5.—Pneumoperitoneum, dorsal position, transverse view (Dr. Schnoebelen). Large ovarian cyst. The needle was first introduced into the cyst, a small quantity of fluid withdrawn and oxygen introduced. The needle was then partially withdrawn and the peritoneal cavity proper filled with oxygen, bringing into contrast the anterior abdominal wall, the outline of the cyst, and the thickness of the cyst wall.

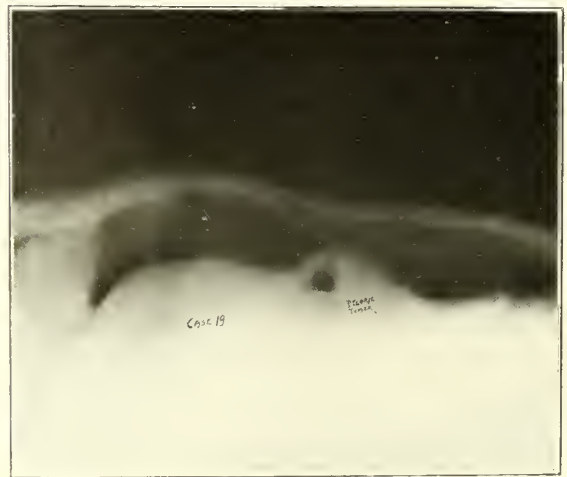


Fig. 6.—Pneumoperitoneum, dorsal position, transverse view, showing the diaphragm above, the liver and the inflated stomach below, with good-sized pyloric tumefaction. There is no evidence of peritoneal adhesions or metastases.

and a specially devised cystoscope. The results of these direct observations within the peritoneal cavity will be expressed in a future paper.<sup>1</sup>

1. The author desires to acknowledge his indebtedness to Dr. William Engelbach for initiation and supervision of the work; to Drs. Paul C. Schnoebelen, Joseph Peden, H. H. Turner and George Gaffney for active cooperation; to Drs. Bransford Lewis, Neil S. Moore, F. W. Bailey and E. S. Murphy for additional clinical material.





Fig. 7.—Pneumoperitoneum, prone position, on abdomen, tube beneath, plate above. DD, diaphragm; L, liver; S, spleen; KK, kidneys; CC, inflated colon, showing thickness of wall. Subdiaphragmatic area clearly seen. Outer and inferior surface of liver well visualized. The attachment of liver to diaphragm by means of coronary ligament is seen. Gallbladder area, represented by triangular shadow between liver and right kidney, is clearly negative. It will be noted that with the change of intra-abdominal pressure there is a tendency for the spleen and liver to be depressed and for the kidneys to occupy a more mesial position, obscuring the hilus region.

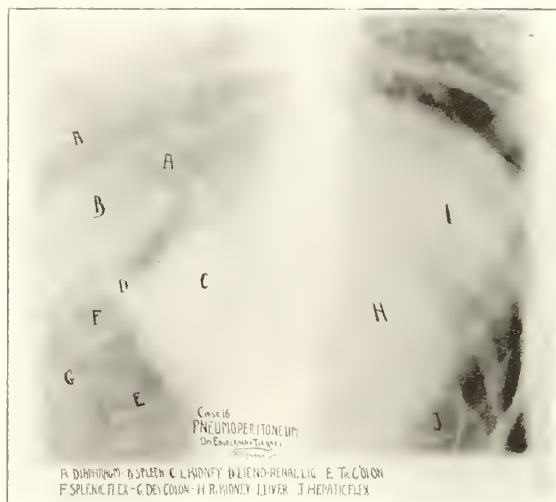


Fig. 9.—Pneumoperitoneum, prone position, patient on abdomen, tube beneath, plate above. AA, diaphragm; B, spleen; C, left kidney; D, lienorenal ligament; E, transverse colon; F, splenic flexure; G, descending colon; H, right kidney; I, liver; J, hepatic flexure.

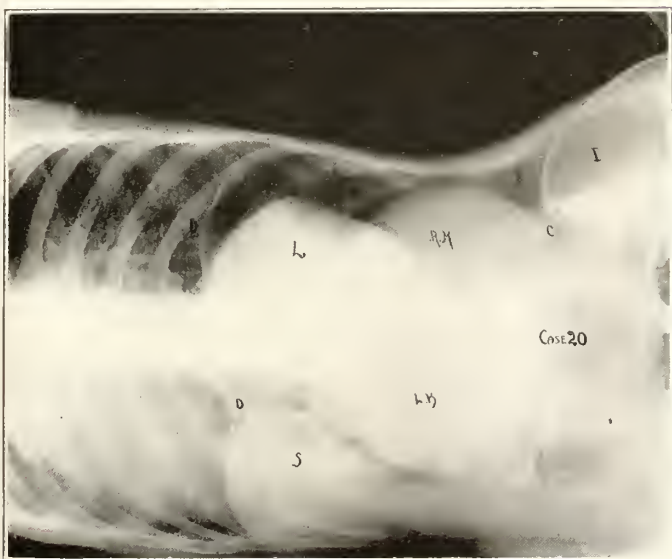


Fig. 8.—Pneumoperitoneum, anteroposterior view (Dr. Schnobelen), patient on left side, tube anterior, plate posterior. DD, diaphragm; S, spleen; L, liver; LK, left kidney; RK, right kidney; C, colon; I, crest of ilium. Note tendency of liver to drop mesially and spleen laterally in left lateral position.



Fig. 10.—Pneumoperitoneum, Trendelenburg position and view represented as though peering into pelvis. CC, inflated colon; KK, kidneys; U, fundus uteri; LL, lateral ligaments; B, bladder.



Fig. 11.—Intraspinal injection of air (Dr. Turner), showing the cisterna interpeduncularis filled with air, throwing into strong relief the sella turcica. In this case 20 c.c. of fluid were withdrawn and replaced with an equal quantity of air, without untoward reaction.

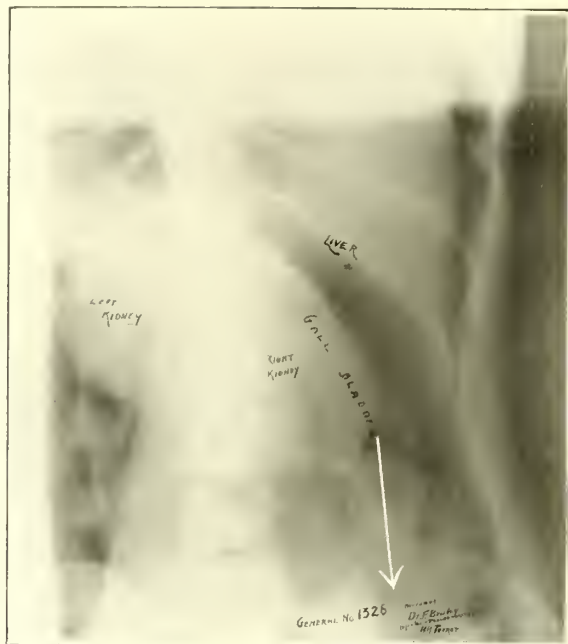


Fig. 13.—Pneumoperitoneum, upright position. Liver and left kidney clearly visualized. Gallbladder overlying right kidney is indicated by inscription and arrow. Point of arrow indicates tip of gallbladder overlying crest of ilium. Marked hydrops verified at operation.

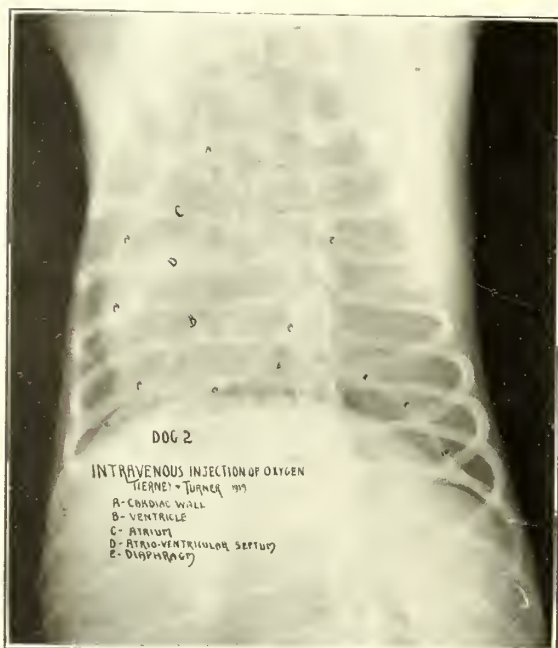


Fig. 12.—Demonstration of a dog's heart after intravenous injection of oxygen. The dog survived the operation and was alive when the plate was taken. A, cardiac wall; B, right ventricle, with portion of left ventricle projecting beyond; C, left atrium; D, atrioventricular septum; E, diaphragm. Of interest is the visualization of the various chambers and septa and the thickness of the cardiac walls.

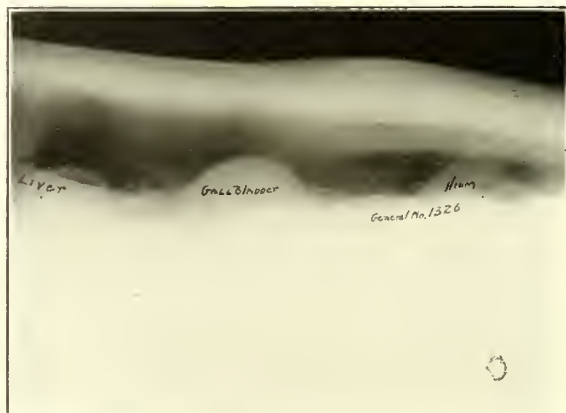


Fig. 14.—Same case as Figure 13, transverse view, showing gallbladder projecting into the oxygen zone.



## LITERATURE

- Alessandrini, P.: Policlinico, Rome, Vol. 26, No 21 (May 25) 1919.
- Bainbridge, W. S.: Technic of the Intra-abdominal Administration of Oxygen, *Am. J. Surg.*, 27: 364, No. 10, 1913.
- Beclere, H.: The Radiodiagnosis of Diseases of the Liver (Le radiodiagnostic des affections du foie), Thèse de Paris, 1910.
- Chilaiditi: *Fortschr. der Roentgenstrahl.*, 17: 173, 1910-1911.
- Dandy, W. E.: Pneumoperitoneum, *Ann. Surg.* (Sept.) 1919.
- Idem: Roentgenography of the Brain After the Injection of Air Into the Spinal Canal, *Ann. Surg.*, p. 397 (Oct.) 1919.
- Idem: Ventriculography Following the Injection of Air Into the Cerebral Ventricles, *Ann. Surg.* (July) 1918.
- Idem: Fluoroscopy of the Cerebral Ventricles, *Bull. Johns Hopkins Hosp.* (Feb.) 1919.
- Dandy, W. E., and Blackfan, K. D.: Internal Hydrocephalus, *Am. J. Dis. Child.*, 8: 406, 1914.
- Idem: *Am. J. Dis. Child.*, 14: 424, 1917.
- Idem: *J. A. M. A.*, 61: 2216, 1913.
- Emerson, Haven: Intra-abdominal Pressures, *Arch. Int. Med.*, 7: 754, 1911.
- Godwin, H. J.: A Note on Intraperitoneal Injections of Oxygen During Abdominal Operations, *Lancet*, 2: 828, 1912.
- Goetze, C.: Roentgen Diagnosis in Gas-Filled Abdomens, a New Method (Die Röntgendiagnostik bei gasgefüllter Bauchhöhle, eine neue Methode), München, med. Wehnschr., 46, 1275, No. 46, 1918.
- Idem: München. med. Wehnschr., No. 35, 1918.
- Henszelman, A.: The Roentgen Diagnosis of the Spleen (Die Röntgendiagnostik der Milz), *Wien. klin. Wehnschr.*, No. 33, p. 915, 1918.
- Jacobaeus, H. C.: The Possibility of Utilizing Cystoscopy in the Examination of Serous Cavities (Ueber die Möglichkeit die Cystoskopie bei Untersuchung seröser Höhlungen anzuwenden), München. med. Wehnschr., No. 40, p. 1090, 1910.
- Idem: *Beitr. z. Klin. d. Tuberk.*, No. 25, 1913.
- Idem: München. med. Wehnschr., No. 38, p. 2017, 1911.
- Kelling, G.: Esophagoscopy, Gastrosopy and Colonoscopy (Ueber Oesophagoskopie, Gastroskopie und Coloskopie), München. med. Wehnschr., No. 1, p. 21, 1902.
- LePage, R.: Radioscopy and Radiography of the Spleen (La radioscopie et la radiographie de le rate), Thèse de Paris, 1912.
- Lorey: Demonstration of a Number of Rare Roentgen Findings (Demonstration einiger seltener Roentgenbefunde), *Verhandl. d. Deutsch. Röntgen Gesellsch.*, 8: 52, 1912.
- Meyer-Betz, F.: Method and Clinical Significance of the Showing of the Liver in a Roentgenogram (Methode und klinische Bedeutung der Darstellung der Leber in Roentgenbild), München. med. Wehnschr., No. 15, p. 810, 1914.
- Moore, S.: Roentgenological Findings in a Case of Pyopneumothorax Subphrenicus Dextra, *Am. J. Roentgenol.*, 6: 83, 1919.
- Orndoff, B. H.: Pneumoperitoneum in X-Ray Diagnosis, *J. Roentgenol.*, Vol. 2, No. 3, 1919.
- Peschman, R. G., and Corper, H. J.: *Am. Rev. Tuberculosis*, 1: 165, 1917.
- Rautenberg, E.: Roentgen Photography of the Liver, Spleen and Diaphragm (Roentgenphotographie der Leber, der Milz und des Zwerchfells), *Deutsch. med. Wehnschr.*, No. 24, p. 1205, 1914.
- Idem: The Clinical Use of Roentgen Photography of the Liver and Spleen (Klinische Anwendung der Roentgenphotographie der Leber und Milz), *Berl. klin. Wehnschr.*, No. 36, p. 1608, 1914. Idem: No. 1, p. 22, 1917.
- Idem: Roentgen Diagnosis in Diseases of the Liver (Röntgendiagnostik bei Leberkrankheiten), *Deutsch. Arch. f. klin. Med.*, 129, Nos. 3 and 4 (June) 1919.
- Idem: Pneumoperitoneum Roentgen Diagnosis (Pneumoperitonische Röntgendiagnostik), *Deutsch. med. Wehnschr.*, No. 8, p. 203, 1919.
- Rist et Maingot: Radiologic Examination and Therapeutic Pneumothorax (Examen radiologique et pneumothorax thérapeutique), *Bull. et mém. Soc. méd. d. hôp. de Par.*, No. 34, p. 377, 1912.
- Rosenblatt, Joseph: Pneumoperitoneum, *New York M. J.*, 60: 501, No. 12.
- Schmidt, A.: A New Method in Connection with the Roentgen Examination of the Abdominal Organs (Ein neues Verfahren zur Röntgenuntersuchung der Bauchorgane), *Deutsch. med. Wehnschr.*, No. 8, p. 201, 1919.
- Stein, Arthur, and Stewart, William H.: Roentgen Examination of the Abdominal Organs Following Oxygen Inflation of the Peritoneal Cavity, *Ann. Surg.*, p. 95 (July) 1919.
- Stewart, William H.: *Am. J. Roentgenol.*, Vol. 1, No. 2.
- Ulrichs, B.: Roentgenograms of the Knee-Joint After Inflation with Oxygen (Röntgenogramme des Kniegelenks mit Sauerstoffeinblasung), *Fortschr. a. d. Geb. d. Röntgenstrahlen.*, 21: 618, 1913.
- Weber, F.: The Importance of Introducing Oxygen, Particularly Air, Into the Abdominal Cavity for the Purpose of Diagnostic Roentgenology (Ueber die Bedeutung der Einführung von Sauerstoff resp. Luft in die Bauchhöhle für die diagnostische Röntgenologie), *Fortschr. a. d. Geb. d. Röntgenstrahlen.*, 20: 453, 1913.

## THE CLINICAL VALUE OF THE COMPLEMENT FIXATION TEST FOR TUBERCULOSIS\*

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ST. LOUIS

The reports on the complement fixation test for tuberculosis are variable, ranging from 100 to 50 per cent. positive reactions in active tuberculosis and from 20 per cent. positive to 100 per cent. negative in nontubercular cases.

Craig,<sup>1</sup> in 1915, found 92.6 per cent. positive in active cases and 66 per cent. positive in inactive cases. Miller,<sup>2</sup> in 1916, records 100 per cent. positive in active tuberculosis and 100 per cent. negative in the nontuberculous. Burns, Slack et al.,<sup>3</sup> in 1917, were not so favorable in their report. Moon,<sup>4</sup> in 1918, found 85.2 per cent. in 156 cases of tuberculosis; of these 87.5 per cent. were positive in incipient cases, 85.7 per cent. positive in moderately advanced and 84.4 per cent. in far advanced cases, while 40 per cent. of sixty-one suspected cases were positive. Of 100 positive Wassermann serums, thirty-eight gave positive complement fixation test. He also found twelve positive reactions among 100 healthy young adults. He believes the test to be as valuable in tuberculosis as the Wassermann reaction is in the diagnosis of syphilis.

Brown and Pitroff,<sup>5</sup> in 1918, gave 51 per cent. positive in incipient cases, 73 per cent. positive in moderately advanced cases and 81 per cent. in far advanced cases. Long,<sup>6</sup> in 1918, reports 51.5 per cent. positive in tuberculosis and 13.6 per cent. positive in nontubercular cases.

Stivelman<sup>7</sup> found 50 per cent. of the tubercular cases, active and inactive, gave positive reaction, 74 per cent. of twenty-five inactive cases with positive sputum gave a complement fixation whereas only 28 per cent. of twenty-five active cases with negative sputum gave a positive reaction. Inactive cases with negative sputum gave 41 per cent. positive while in active cases with negative sputum only 28 per cent. were positive.

Stoll and Newman,<sup>8</sup> in 1919, from Walter Reed Hospital, where every facility for intensive study was at command, report 58 per cent. positive complement fixation in active tuberculosis (twenty-seven cases with positive sputum gave 67 per cent., while nine cases with negative sputum gave 33 per cent. positive tests), 16 per cent. in possibly active tuberculosis, and 6 per cent. in old inactive cases. Ninety-two per cent. negative reactions were found in sixty-eight cases clinically not tuberculosis.

\* Read before the St. Louis Medical Society, Nov. 18, 1919.

1. Craig, *Am. Jour. Med. Sc.*, 150, 781, 1915.2. Miller: *Jour. Am. Med. Assn.*, 67, 1519, Nov. 18, 1916.3. Burns; Slack, et al., *Jour. Am. Med. Assn.*, 68, 1386, May 12, 1917.4. Moon: *Jour. Am. Med. Assn.*, 71, 1127, Oct. 5, 1918.5. Brown and Pitroff: *Am. Rev. Tuberc.*, 2, 525, 1918.6. Long: *Am. Rev. Tuberc.*, 2, 541, 1918.7. Stivelman: *Am. Rev. Tuberc.*, 2, 546, 1918.8. Stoll and Newman: *Jour. Am. Med. Assn.*, 72, 1044, April 12, 1919.

Ives and Singer,<sup>9</sup> as reported here in 1917, found 93.2 per cent. positive complement fixation in clinical pulmonary tuberculosis and 37 per cent. positive in suspected cases.

We were desirous of studying the clinical value of the test in the ordinary or unselected run of medical cases, and in the doubtful cases of tuberculosis which are so puzzling to the clinician. Our study comprises 132 cases, 100 of which were studied in private practice and thirty-one in the medical clinic of St. John's Hospital.

A great many of the cases were referred for examination and complement fixation and Wassermann tests were made as a matter of routine; the others represent the ordinary medical cases as they come in private practice. No special effort was made to select cases of known tuberculosis. With only five exceptions did we have the tests made when signs of active tuberculosis were present with positive sputum. Complete histories were taken and physical examinations made on all patients, including blood, sputum, urine, and special examinations as indicated. The fluoroscopic and skiagraphic examinations were made in doubtful cases to assist in the interpretation of the physical findings in the lungs.

Dr. George Ives made the complement fixation and Wassermann test on all the patients without any knowledge of the clinical nature of the case.

The history number and the result of the tests were kept on file from May 1, 1917, to Nov. 1, 1919. During the past week histories were reviewed, the diagnosis recorded, and the cases classified as follows:

a. Positive pulmonary tuberculosis. (Signs of active tuberculosis with tubercle bacilli in sputum).

b. Clinically tuberculosis. (Signs of activity, tubercle bacilli not found in sputum).

c. Suspected tuberculosis. (History positive, physical examination doubtful, old inactive cases).

d. Clinically not tuberculosis. (Other diagnosis).

Naturally, there is a percentage of error in the classification of cases; however, the error of placing cases in D (clinically not tuberculosis) offsets or exceeds the error of placing cases in the other divisions. The sputum was positive in 26.9 per cent. active cases.

Out tests were not repeated, save in one instance where we had a negative reaction on a nontuberculous, to whom we gave 225 mm. of tuberculin (B. E) over a period of twenty-three days with a second negative test immediately following the injections.

Table 1 shows the result of the test in each division of the cases. The fifty-four positive tests includes all positive reports, whether one, two, three or four plus.

A., Table 1, represents seven cases of active pulmonary tuberculosis with positive sputum, six of them being in the far advanced stage. Of these, three gave a four plus, one a three plus, and one a two plus reaction, or 71.4 per cent. positive complement fixation test for tuberculosis. One of the negative cases had positive clinical findings of moderately advanced pulmonary tuberculosis, with negative sputum at the time the test was made. She subsequently had influenza and bronchpneumonia after which her sputum became positive. The other negative report was on a case of greatly advanced pulmonary tuberculosis, involving the greater part of both lungs with nephritis, diabetes and syphilis. He died a month after the test was made. There were three positive Wassermans, two of which were diagnosed clinically as having tuberculosis and syphilis.

B., Table 1, represents nineteen cases of clinically active tuberculosis; of these one gave a four plus, seven a three plus, five a two plus, and four a one plus reaction, or 89.4 per cent.

TABLE 1.—THE CLINICAL VALUE OF THE COMPLEMENT FIXATION TEST FOR TUBERCULOSIS AS SHOWN IN THE STUDY OF ONE HUNDRED AND THIRTY-ONE CASES

	Complement Fixation				Wassermann			
	No. Cases	Positive	Negative	%	No. Positive	Negative	%	%
A. Positive Tuberculosis ...	7	5	2	71.4	3	4	42.8	57.1
B. Clinically Tuberculosis ....	19	17	2	89.4	7	12	36.8	63.1
C. Suspected Tuberculosis ....	36	20	16	55.5	8	28	22.2	77.7
	62	42	20	67.7	18	44	29	70.9
D. Clinically not Tuberculosis ....	69	12	57	17.3	8	61	11.5	88.4
	One in 5.7 positive			82.6	One in 8.6 positive			
Totals .....	131	54	77	41.2	26	105	19.8	80.1
				One in two and four tenths positive			One in five positive	

positive. Of the two negative results, one had tuberculous glands removed from neck with evidence of the disease in lung in addition to syphilis, the other had rather definite signs of activity in the lungs, with loss of weight and strength, afternoon temperature and fluoroscopic and skiagraphic evidence of disease.

The sputum undoubtedly would have been more frequently positive in this series had we been able to examine it more carefully or more frequently, but several of the patients were seen only for examination with one or two unsatisfactory specimens, while in three others we were unable to get any sputum at all. There were seven positive Wassermans, five of whom were clinically diagnosed as having tuberculosis and syphilis.

C., Table 1, shows thirty-six cases of suspected tuberculosis, with twenty, or 55.5 per cent., giving a positive serum reaction for tuberculosis. Of these, twelve gave one plus, six gave two plus, and two gave three plus, none a four plus.

There were eight positive Wassermans and six clinically diagnosed as having syphilis and tuberculosis.

<sup>9</sup> Ives and Singer: Jour. Missouri Med. Assn., IV, 284, July, 1917.



D., Table 1, shows sixty-nine cases with diagnosis other than tuberculosis; out of these twelve, or 17.3 per cent., gave positive complement fixation tests. These gave ten one plus and two three plus. There were eight positive Wassermans and nine cases clinically syphilis.

Of the sixty-nine cases, one in every 5.7 cases gave a positive complement fixation reaction and one in every 8.6 cases gave a positive Wassermann.

Out of the 131 cases, one in every 2.4 cases gave a positive complement fixation test, and one in every five cases gave a positive Wassermann. Of sixty-two cases of tuberculosis and suspected tuberculosis forty-two, or 67.7 per cent., gave a positive complement fixation reaction. Of the sixty-nine cases clinically not tuberculous seventeen, or 17.3 per cent., gave positive reaction for tuberculosis. Of the fifty-four positive reports, twenty-six were one plus, twelve two plus, twelve three plus, and four four plus.

There were twenty-six positive Wassermans and twenty-two cases diagnosed clinically as having syphilis.

#### CONCLUSIONS

1. The complement fixation test for tuberculosis is of some value in the cases of positive tuberculosis. A negative reaction in this class usually indicates far advancement with very grave prognosis.

2. It has a clinical value as additional evidence in clinically active tuberculosis.

3. In suspected cases it has a slight value only in being an additional factor for or against tuberculosis.

4. A diagnosis of clinical tuberculosis cannot be made from a positive reaction, neither can tuberculosis be excluded from negative reaction.

5. It is not of so much value in tuberculosis as the Wasserman reaction is in syphilis.

6. It is an aid only when considered in conjunction with complete history and thorough physical examination.

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#### THE INTERPRETATION OF THE COMPLEMENT FIXATION REACTION IN TUBERCULOSIS \*

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During the past several years the subject of the complement fixation reaction in tuberculosis has had a prominent position in the literature on tuberculosis. This subject, however, dates from a publication by Bordet and Gengou<sup>1</sup> which appeared in 1903.

Notwithstanding these facts and the fact that very optimistic reports have been made as to

the value of the reaction, it is the habit of clinicians, when they write or talk on the subject of the diagnosis of tuberculosis, either briefly to condemn the reaction as a practical aid or to omit all references to it.

Neither the merits nor the demerits of this test can be satisfactorily presented without an extended discussion. In this discussion I am sure the subject will not be so completely presented as I would desire it to be. If, in the presentation of the position which I have come to assume as regards this test, it might appear that I wander to unrelated subjects, it is because this test, a human observation, should first of all be interpreted on the basis of other observations in the spirit of conservatism.

I have no argument with him who reserves judgment as to the value of the reaction, for it must be admitted that results with the test show considerable variations, and that opinions as to the value of the test are to this date just as variable as the results. It is not to be expected that uniformity in opinion as to the value of the test or uniformity in results will ever be realized. As there are many factors which form the basis of opinion, opinions will become uniform when these factors are uniform. Uniformity as to results with this test, as with any other procedure, whether it be some other laboratory test, a surgical operation, or a procedure in physical diagnosis, will be realized when those who carry out these procedures are uniform in natural ability, in judgment, in education, etc.

It seems justifiable to state that grave mistakes are commonly made in the conduct of clinical laboratories, and in the attitude which many have assumed toward the laboratory. This unpleasant and neglected subject I consider of first importance in the interpretation of a laboratory report, and especially in a report on the complement fixation reaction in tuberculosis.

It is not true, as I have been told, that diagnostic laboratory work consists simply in the mixing of certain stock solutions and the observation of a color reaction. It is not true to any considerable extent that those devoid of a knowledge of the fundamental principles of the fundamental medical sciences can repeat, in a way to give reliable diagnostic information, many of the greatest medical researches in bacteriology, serology, chemistry and pathology. It is not true that clinical laboratory work is too humble an occupation for a trained man to pursue as a profession. It is not true that laboratory observations can properly be withdrawn from the category of human observations and be interpreted on another basis.

To cure the afflictions of the clinical laboratory certain measures have been proposed. As in the treatment of the ills of the human body, so in the treatment of the ills of the laboratory, there is no dearth of remedies or therapeutic schools. The proposed remedy for the laboratory which has been most prominently men-

\* Read before the St. Louis Medical Society, Nov. 18, 1919.  
1. Bordet and Gengou: *Compt. rend. Soc. de Biol.*, 1903, Vol. CXXXVII, p. 351.

tioned, is the adoption of uniformity in technic.

Let us first apply this remedy to another field: it may conveniently be applied to the field of surgery. We are told that a master in urological surgery has in prostatectomies an operative mortality of less than 5 per cent., but that this operation in the hands of all surgeons has a mortality of over 25 per cent. Let us apply the remedy, uniformity in technic, and thereby we shall hope that the results of the master-surgeon will be obtained. It would be foolish to apply such a remedy with the hope that much will be gained in this field. As we all know, there are other factors besides operative technic to be considered in surgical mortality, and the adoption of a certain technic does not insure the proper execution of that technic.

In serology as in surgery we are confronted with similar situations as regards results. As to the Wassermann test Vedder<sup>2</sup> has stated: "One is impressed by the fact that the Wassermann reaction must be a test of surprising merit to have survived all the clumsy technic that has been perpetrated in its name." Let us here apply the great remedy, the uniform technic. Although attempts have been made in this direction, little has been accomplished. On the other hand, I believe that those who obtain the best results in more than one laboratory procedure are those who have the courage of their convictions to depart from some conceptions and practices which have become somewhat fixed by custom and by the fact that the names of respected investigators are attached to them. I have very little interest in the proposal for uniformity in technic because the adoption of a certain technic does not insure uniformity in its execution, and because a uniform technic serves as a blanket to cover unfavorable results. Experience, education and the other factors which constitute ability far outweigh the matter of the technic which is attempted.

To remedy the unfavorable situation in which the clinical laboratory has frequently been placed, I believe much may be accomplished if we assume a certain attitude toward the subject. The attitude which I recommend is that it is difficult (but not impossible) for anyone to obtain a high degree of efficiency with any test however simple that test may seem to be. It is impossible for anyone to realize perfection with any test; and errors will be made no matter what precautions are taken to secure reliability.

If this attitude should be adopted and these facts more generally realized, it would lead to the requirement of higher standards for those doing this kind of work. The field of technicians in clinical laboratories should be more limited than it is in present practice. As a

general proposition technicians are not justified in making diagnoses, nor should their independent observations be the basis on which diagnoses rest. I would limit the field of technicians on the plea that it is necessary to do so in order to secure the necessary efficiency in the clinical laboratory. There may also be certain legal and moral aspects to the question.

It is to be doubted if there is anyone who values the services of technicians more than I do, or who to a greater extent admires and appreciates the proficiency that a few of them attain in limited fields. Nevertheless, I am compelled to maintain that their work, whether it is confined to the ordinary or to the extraordinary procedures, requires constant supervision and criticism on the part of one who is professionally qualified. I have never had in my employment, nor have I ever known of, a technician who could independently and satisfactorily conduct a clinical laboratory however limited the work of that laboratory may be.

These are considerations of first importance in the interpretation of the complement fixation reaction in tuberculosis. Look not first to the literature for the statistics for the interpretation. Inquire not as to the reagents used in the test, nor as to the technic which has been attempted. To be of any value this test must represent the work of a professional who has demonstrated his ability to obtain favorable results with the test.

There are three complement fixation tests which are frequently useful in medical practice. In the order of their importance as diagnostic tests they are: the Wassermann test, the complement fixation test for gonorrhea and the complement fixation test for tuberculosis. The complement fixation test for gonorrhea has been reported favorably in the literature. Since the specific antibody in gonorrhea is less abundant than in syphilis, the gonorrheal test is more difficult than the Wassermann test and the usual results in practice are very unfavorable to the test.

In complement fixation in tuberculosis it is more difficult to demonstrate the specific antibody than it is either in syphilis or gonorrhea. In the test as applied to gonorrhea and tuberculosis we have illustrated the supreme importance of an understanding of serological principles and of the ability of the serologist to make the proper very delicate adjustment of reagents. In other words, the serologist must know both the theory and practice of serology as applied to these tests. Again, with these tests, to a greater extent than with the Wassermann test, it is necessary that the clinician be familiar with the principles of immunity.

That it is possible for only a few of those engaged in serological work to obtain the best results with the reaction, I accept as a fact.

2. Vedder; Bull. No. 8, Surgeon-General's Office, Washington, D. C., 1915, 8.



The consideration that the test is difficult to perform greatly limits the value of the reaction in practice.

One of the most important facts regarding tuberculosis which should enter into the interpretation of the reaction is that individuals may have tuberculous infection without tuberculous disease. This test can make no positive distinction between the two conditions. About 10 per cent. of the sick who are clinically non-tuberculous will give positive reactions. In the healthy class distinctly fewer positive reactions are obtained than in the clinically nontuberculous sick class; but in the healthy class positive reactions of all degrees may be obtained. The hope which has been expressed, that the degree of the reaction may be of assistance in distinguishing tuberculous infection from tuberculous disease cannot be entirely realized, because ++ reactions have been observed in those who are apparently well and weak and negative reactions may be obtained in definitely tuberculous individuals.

There are several points concerning the strength of the reaction which enter into the interpretation. Not only do we obtain positive reactions only rarely with the clinically well, but when such reactions occur they are usually weak. It is the rule, not without exception, that the strength of the reaction is in proportion to the extent of the disease. Thus in the definitely tuberculous, in whom the disease is not extremely far advanced and in whom the disease is not rapidly progressive, from 75 per cent. to over 90 per cent. of positive reactions will be obtained. A large number of these reactions will be strongly positive. With the incipient cases and with the tuberculous suspects who are eventually proved to be tuberculous, the number of weak and negative reactions will be greater than in the class of advanced tuberculosis. Hence it should be understood that this test is not infrequently negative or weakly positive in the type of cases in which the clinician needs assistance, and in which it was to be hoped that the test would prove its chief usefulness.

These negative and weakly positive reactions should not be allowed to mislead the clinician, for if properly interpreted they are capable of affording practical information. When they are obtained they usually indicate early tuberculosis and that the tuberculous process is of limited extent.

The strength of the reaction gives an indication of the degree of the protective reaction against the disease. A protective reaction cannot usually be demonstrated in the blood in cases of very limited tuberculous involvement and in cases of very advanced tuberculosis when the defensive forces no longer operate. It will be seen that in one type of tuberculous individuals negative reactions are of more favorable import than positive reactions, and in another type of the tuberculous they indicate a grave

prognosis. These observations serve to indicate the necessity of a coordination of the clinical data with the results of the test, and of the necessity of placing different interpretations on the reaction when the same result is obtained in different types of cases.

The very strict parallelism between clinical diagnoses and the results of complement fixation as reported by Craig<sup>3</sup> and by Miller and Zinsser<sup>4</sup> does not occur in the experience of the majority of workers with this test. This parallelism cannot occur when the test is applied to a large number of unselected individuals. Clinical diagnoses as to the presence or absence of tuberculosis are erroneous in a considerable number of instances; hence clinical diagnoses do not offer entirely satisfactory criteria on which to base judgment of this test.

Should we look on a positive reaction as indicating an active tuberculous process, or may a former infection provoke a positive reaction as in the condition of allergy as indicated by the von Pirquet phenomenon? Since the definitely tuberculous give a very high percentage of positive reactions, since the healthy are only occasionally positive, and since in the experimental production of amboceptors these bodies disappear from the blood in a short interval after the administration of the antigen, I interpret a definitely established positive reaction as indicating an active tuberculous focus at the time the blood was withdrawn.

I have briefly indicated the influence which the strength of the reaction should exert on the interpretation. Especially, as regards weak and negative reactions, repeated tests on the same individual are necessary for their proper interpretation. Some of the weakly positive reactions on repetition may be shown to be erroneous, and positive reactions are at times obtained on specimens which previously were negative. Such results are unavoidable, because complement varies in its fixability, because it is impossible for the serologist to conduct the test with absolute uniformity, and because it has been observed that blood which has stood for several days is more suitable for the test than fresh blood.

I hope I have been sufficiently clear in the presentation of this matter so as to make it evident that this test can never determine positively whether or not a patient is ill with tuberculosis. On the other hand, the results of this test are in fairly close harmony with the true condition of the patients who have been tested, and hence the test should influence judgment in arriving at a diagnosis. This test should not displace clinical observations, but if properly used it will stimulate the clinician to make more accurate and thorough observations. If the

3. Craig: Complement Fixation Test in the Diagnosis of Tuberculosis, Jour. A. M. A., 1917, Vol. LXVIII, p. 773.

4. Miller and Zinsser: Proc Soc. Exper. Biol. and Med., 1916, Vol. XIII, p. 134; Miller: The Clinical Value of Complement Fixation in Tuberculosis, Jour. A. M. A., 1916, Vol. LXVII, p. 1519.

test should be generally applied in clinical laboratories, and should it be used in any way as a short-cut to diagnosis, it will undoubtedly result in more harm than good.

The test furnishes a means by which patients under treatment may profitably be observed. A decrease in the strength of the reaction in a patient who is clinically improving, furnishes more favorable information than the clinical observations alone. A patient who is clinically cured but who still gives a positive reaction, should be looked on as an arrested case.

I feel assured that the repeated application of the test to patients under treatment, or to patients suspected of tuberculosis, will frequently give interesting and practical information. When plotting a curve based on complex observations, the greater the number of observations the more accurate the curve. A single incorrect observation will not prevent the correct interpretation as to the nature of the curve. Since this test cannot be performed with uniform efficiency, and since there are various influences which modify the antibody content of the blood, only when repeatedly performed on the same individual can this test give the maximum information of which it is capable of affording.

It should be understood that my published<sup>5</sup> results with this test, that my impressions as to its value and limitations, and that the opinions which others may have regarding the test as I perform it, are based almost entirely on a single observation on each patient. Most assuredly clinicians do not apply their own methods of examination in a manner which is evidently so unfair. The fact that merit can be discovered in the test when it has been given an unjust and incomplete trial, indicates that the test will have greater merit when properly applied.

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#### MEDICAL PROBLEMS SUGGESTED BY THE WAR\*

PRESIDENT'S ADDRESS

ROLAND HILL, M.D., C.M.  
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No one could be elected president of the Western Surgical Association without having the most sincere appreciation of the very high honor that has been conferred on him. I assure you it is one that I value most highly and at the same time I feel that it carries with it responsibility of a marked degree.

5. Ives and Singer: The Complement Fixation Test for Tuberculosis and the Wassermann Test in Pulmonary Tuberculosis, *J. Missouri M. A.*, 1917, Vol. XIV, p. 284; Fleisher and Ives: An Antigen for Use in Complement Fixation in Tuberculosis, *Jour. Lab. & Clin. Med.*, 1918, III, 302.

\* Read at the 29th Annual Meeting, Western Surgical Association, Kansas City, Mo., Dec. 5, 1919.

In seeking for a theme to discuss at this meeting it has seemed to me more timely to consider some of the medical problems suggested as a result of the recent international upheaval than to present a strictly scientific subject. The world's greatest war, now so happily terminated, shook to its foundations the whole fabric of our modern civilization and threw an almost overwhelming strain on all branches of our national industry. The spur of self-preservation applied to the industries of the country in the prosecution of the conflict, has resulted in many new and valuable discoveries applicable to times of peace. The statement that "necessity is the mother of invention" was never more strikingly illustrated than is shown by a study of the footsteps of this great country when once determined on war.

Almost unprepared at first, practically ignored by Germany, and regarded by the Allied powers as a source of industrial more than military strength, America became ever an increasing factor until the battles of Chateau Thierry, Belleau Wood and the Argonne Forest, proved determining factors in causing the Central Powers to sue for peace. Behind this great military effort were coordinated the great industries of the country. All our mechanical forces, the arts, sciences, and professions, came to the support of the nation in this period of anxiety and danger.

No profession responded more nobly than did the profession of medicine. The internist, the research man, the surgeon, in fact, representatives of every department of the profession, were equally ready in response to the nation's call. Approximately 50,000 civilian doctors joined the colors and 70,000 more expressed their willingness and obligated themselves to do so by applying for membership in the Volunteer Medical Service Corps. We were particularly gratified with the record made by the medical profession of the city of St. Louis. Approximately 600 entered active service and of the remainder, about 1,300, the Volunteer Medical Service Corps, of which I was chairman, succeeded in getting pledges from all but eighteen. We doubt if this record has been equaled by that of any other city in the country.

The Western Surgical Association alone had a representation in active service of more than one-third of its membership, and it is doubtful if there was a single one of the remainder not engaged to a greater or less extent in activities pertaining to the war.

This great national upheaval was not without far-reaching effects on the medical profession. The value of medical and surgical services was never more fully recognized than it was by the commanders of the armies in the field. We were enabled to learn many things about the protection of large bodies of men that we did not know before. We also learned a great deal



about the treatment of wounds that will be far-reaching in its effects, especially among the members of our profession who handle traumatic surgery. The war, however, created an opportunity for "irregular" practitioners, osteopaths, chiropractors, and Christian scientists, who may be termed the Bolsheviks of medicine, sought recognition, and in some of the states succeeded in securing legislative support that would have been impossible under normal conditions.

In the state of California we notice that even osteopaths were admitted as interns in the state hospitals. Later on they were made members of the medical examining boards of Texas, California and Washington. The fact that the attainment of medical education has been made so difficult led to a scarcity of medical men on the advent of the war that gave to these irregulars the chance they have long been striving to secure to establish themselves firmly throughout the country.

Today a man who would enter medicine must spend several of the best years of his life and many thousands of dollars to perfect himself for the duties of the regular profession. This, with the war, has tended to cause many men to seek the easier path of entering one of the irregular branches. It has ever been easier to plant a noxious weed than to get rid of it and if there ever was a time when we needed surgical organization with a view of protecting the people of the country and the surgeons of the country from the noxious influence of the irregulars that time is the present. We have such an organization in the American College of Surgeons. It is time that each one of us should realize that in the support of this organization we have a force with which some of our ideals may be accomplished. The aims of the college appeal to all of us. It seeks to uplift the surgeon and put him on a plane universally recognized and respected by every one. The college has made excellent progress in the work of hospital standardization but it will fall far short of what it should accomplish unless it gets legislative recognition in each one of the states. The American national examining board is seeking to secure such recognition for itself, and there seems no reason why the college of surgeons should not do likewise.

At the present time I can see no reason why the American College of Surgeons should not seek such a plane that its degree would be recognized by the legislature of every state and the holder thereof be permitted to practice surgery without any of the obstacles that are now met in going from one state to another. What we want in this country is a national surgical degree like that of the Royal College of Surgeons of England, respected and recognized as a national token of efficiency in every state in the Union. Personally, I should like to see the

American College of Surgeons have two degrees. A membership for the younger men and those of moderate proficiency, and a fellowship degree for the men who have shown unusual attainments. Furthermore, I should like to see it more than a national degree, a degree available to any man presenting the proper qualifications, no matter whether he came from Europe, South America, or Australia. The more universally it is recognized the greater will be the credit to American surgery.

In thus endorsing the American College of Surgeons I am doing so because the college represents surgical organization of a high degree. I realize full well that so far it has been a disappointment to many of its members. There are those who regard it as more of a liability than an asset. It represents, however, organization and there is not a surgeon in the country who does not realize that the strength of organization is needed, particularly at the present time. If the college is not working to best advantage then its methods should be changed for this organization is large enough and strong enough to attain great good. When effective effort is made to secure legislative support throughout the Union then the laity will soon recognize the difference between the physician and the surgeon. The college will in this way become a necessity for all young men who are looking forward to surgical achievements. Then it will be a definite asset to every one of its members.

The importance of hospitals and hospital organizations has been emphasized by the recent work of the American College of Surgeons in conjunction with the American Medical Association and other bodies. Many phases of this question were ably presented by the presidential address of our late lamented Fellow, Maurice J. Littig of Davenport, Iowa. I believe that in the general run of hospitals sufficient time and care are not devoted to instruction of interns and others engaged in caring for the patients. To my mind, every institution devoted to the care of the sick should be a center of greater or less degree for the education of those who are devoting their lives to this work. Members of all departments of service should be instructed in detail as to the latest and best methods of doing the work assigned to them. The house surgeon should have clinical instruction from his chief and not be left to learn simply as he can by his own observation, as is the rule in most hospitals not devoted to the instruction of the student. By devoting a little time to the interns their interest will be increased and the surgeon will be more than repaid for his time by their added efficiency and devotion.

When the bright light of military necessity was brought to bear in searching for soldiers in our strenuous preparation for war, the one vital factor that stood out in bold relief was the

large number of men disqualified for military service because of physical defects. It is doubtful if many people in the country, even the medical men, realize what a large percentage of the male population of the country had physical defects of such a character as to render them unfit for military service.

It is probable that no other defect stood out more prominently than that of hernia. The number of cases of hernia and varicocele was almost incredible. These men were not considered able to render their country their best physical efforts until these defects were remedied. The majority of them undoubtedly would have gone through life suffering from their disability if it had not been found and remedied by the government in its efforts to draw on the man power of the nation. The percentage of our people afflicted with hernia considering an average of 1 to 15, would show that approximately 7,000,000 of our population are afflicted in this way. The impairment in some cases may be slight but unquestionably a very large number suffer from more or less impairment of their physical power. Where such a large percentage of the population is afflicted, undoubtedly there will be some lessening of the productive power of the country.

Adenoids and tonsils and defective teeth are other lesions that may be classified with hernia as causing directly or indirectly a loss of physical power. Under these conditions, would it not be better to have careful medical inspection of all children in very early life and all physical defects card indexed? In this way the general public would be gradually educated to the point of seeking relief for these curable defects. At the present time in certain communities we have medical boards associated with the public schools. These boards are composed of a number of doctors and nurses who search carefully for all defects that impair the children both mentally and physically and put them in the very best environment for having these defects remedied. In highly organized communities very effective work has been accomplished. In other communities the work has not been so effective and in still other communities, embracing probably by far the larger percentage of the young of our population, this work is not carried on in anything but a perfunctory manner or not at all. To my mind this is a matter of national importance.

I think the health of the young of the country is one of the most important of our national assets. I believe that this work should be uniform throughout the country and the only way to make it uniform and make it effective is to have it under government control. In Washington we have bureaus that have to do with quarantine and marine hospital service. The public health service is largely a quarantine service. To my mind this is a service that should be

enormously enlarged and extended until it is responsible for the welfare of every community in the country. If this is not feasible, then we should have a national department of health headed by some medical man of high standing who should be a member of the highest of our national councils.

The curable defects, like hernia, tonsils and adenoids, should be remedied in early life. It may be a debatable question whether or not children suffering from these defects should be cured by men under the supervision of the government, but it is not a debatable question that these defects should be remedied by some one. Every child that is handicapped by one of the curable surgical lesions should have that handicap removed before entering on the productive period of life so that when assuming the active burdens of manhood its usefulness may not be impaired by any condition that could possibly be remedied.

It is probable that no other problem associated with the physical health of the men was of more importance than that of venereal diseases. The war did one great national service when it showed to us this problem in its true light. The influence of this class of diseases alone on the nation's manhood cannot be accurately estimated. A study of the army statistics, however, brings before us (a) the fact that we have too long ignored this peril and condoned its ravages. From April, 1917, to September, 1918, the loss to the army from venereal diseases alone represented 2,295,000 days of service. This occurred in young men living under strictly military discipline and subject to military inspection. If this loss of time and labor in this body of men was so great where they had every care that enlightened prophylaxis and treatment could give, it is almost inconceivable what ravages would be in a like body of men not subject to military discipline where their inclinations and desires acknowledged no restraint. As a matter of fact, it was found that only one-sixth of the venereal diseases in the army originated while the men were in military service, and five-sixths were found to be in men already infected when they entered the army. The loss of time caused by these diseases while under army observation would be but a small percentage of the loss caused by these men in their remote and indirect effects. As medical men we know that the elusive gonococcus comes to light months after the patient considers himself cured. The ravages wrought by these uncured cases form one of the greatest tragedies of our civilization. The individual afflicted with an acute case realizes his condition and as a rule will try to avoid conveying it to others. In the subacute stage the vast majority think that the infective element is gone and the danger of communication past.



These men are the great carriers of this affliction. To them we look for the gonococcal invasion of the wife and oftentimes infection of the eyes of their children. It is estimated that one-half the blindness in the world is directly traceable to this cause. Sterility in the male is another one of its very frequent sequelae. The organism lying latent in the cervix for months, may invade the tubes and render the women chronic invalids only to be relieved by surgery. The desires and joys of motherhood are usually denied women whose tubes harbor the gonococcus. If pregnancy does take place the ovum may be held in the diseased tube and the woman's life seriously impaired by extra-uterine pregnancy. Even more to be dreaded than the lesions caused by invasion of the gonococcus is syphilis with its insidious and far-reaching results. In this disease all symptoms and manifestations may disappear for years and then suddenly manifest themselves in the individual or in his offspring. We have all seen cases of permanent blindness and locomotor ataxia years after the disease was supposed to have been cured. How many cases of cerebral hemorrhage in men below 50 years of age belong to remote consequence of this infection? The effects on the individual themselves while of vital importance, really fade into insignificance when contrasted with the ill effects wrought on the wives and children of those afflicted.

The elimination of the venereal diseases is one of the greatest of our national problems. The tendency to ignore them has disappeared. The greatest of our scientific men backed by the influence of the government are now trying to find some way of overcoming the effects of these diseases.

That these diseases can be reduced to a minimum I believe to be a matter of certainty. The results obtained in the service of the American army in Porto Rico and the work of the British army in Port Said all go to prove that their elimination is but a matter of education and efficient control. There are a few well known factors of the venereal diseases that I would like to enumerate: 1. These diseases are rampant in every walk of life. 2. They are the only diseases of importance that have not been placed under legal control. A child may have measles, whooping cough, diphtheria or scarlet fever, and every effort is made to safeguard the community from contamination with these infections. The house is placarded, the other children are kept from school, and every effort is made to trace the source of the infection. The case is regarded as a menace to the community and the medical guardian of the community, the health officer, becomes directly responsible to the community for its proper control. How different is the condition where an individual contracts gonorrhea or syphilis. There is no valid law forcing the physician to report the infec-

tion in the vast majority of communities. If the man is intelligent he may seek the advice of a competent physician, follow it carefully, the treatment instituted until he is well, and not jeopardize the community. On the other hand, in the vast majority of cases the woman from whom he contracts the infection does not seek medical advice and continues to spread the infection right and left among her admirers. Where the victims belong to the ignorant classes little if any effort is made by either party to be cured properly or to seek to protect the community by self-restraint.

The problem of handling the question of venereal diseases is one of the most vital we have to solve and one of the most difficult. The greatest factors towards this end are education and legalized control. The first and most important step I believe to be one of education. No important question vitally affecting the people is less understood than that pertaining to the venereal diseases. If their causes and results could be thoroughly impressed on the masses of people in every walk of life a great deal would be accomplished. As a matter of fact, although education in these matters has been tabooed, we as surgeons see what great good has resulted from the limited knowledge that has already been disseminated. Twenty-five years ago pus tubes were being constantly encountered in all stations of life. They were found among highly intelligent women almost as frequently as among the ignorant classes. Today this is all changed. Venereal pelvic infections in educated women are much more rare than they were two decades ago. No one realizes this fact more fully than men who are doing pelvic surgery. While there has been such a marked decrease of these conditions among the educated, still we find that in the ignorant classes the same unfortunate state persists as in the past. Proof of this can be found in the gynecological service of any large charity hospital. Legalized control is absolutely necessary. A standard form of laws has been approved (*b*) by the social hygiene board at Washington. These laws, however, will need to be considered very carefully before being adopted. They are made so drastic that individuals guilty of illicit intercourse are subject to very severe punishment in prison. It is very doubtful if some of these provisions will not have a directly contrary effect to what is desired. The means of tracing violations of the moral law are found largely in the resulting venereal infections. If the man who contracts gonorrhea or syphilis knows that he has a prison offense staring him in the face if he goes to a doctor he is liable to keep the matter secret and thus lead to spreading of the infection. To my mind we should have drastic laws but more of the drastic element should be in causing these cases to be reported so that they can be watched

and cured and the infected individuals eliminated as carriers. The health officer should have the same power over them as he has over any other infectious disease. Every effort should be made to find the carriers and those infected should be kept under observation until they are found free from the power of infecting others.

I am not one of those who believe that laws will ever adequately control the sexual impulse. I do believe, however, that the sexual diseases under legalized control can be reduced to a minimum and the country free from the horrible conditions that prevail at the present time.

While the questions of disability due to venereal disease and that due to remedial defects were forced into prominence by the urgent need of the nation for men for the army, another problem of vital importance was brought to the front in the course of the routine and searching examinations that were made. The problem I speak of is the one dealing with defects that are incurable. This is a great and far-reaching question that expands and becomes more difficult the more one ponders over it. One of our statesmen has said that the manhood of the nation is the nation's greatest asset. This may be accepted as a truism. Every normal child born in the country is a national asset, while every incurably defective child is a probable national liability. The cause of permanent incurable defects in human beings are many. Some cannot be traced and seem to be purely accidental. Others, however, and probably a large percentage of them are strictly of congenital origin and can be traced back to strictly preventable causes. Approximately one-half of the defectives were of congenital origin.

The war will not have been fought in vain if it leads to a recognition and correction of the evil influences that have afflicted humanity at large. The benefits wrought by stimulation of our commercial industries are colossal indeed but can not be compared with the results likely to be achieved by a closer analysis and study of the individual elements of our population. Never before have we had presented to us so clearly the large percentage of defectives existing among us. It has never before been so forcibly impressed on us how large a percentage of these defectives are curable, and I am sure but few of us realize the number of these defectives who cannot be cured. The class of defectives that cannot be remedied present one of the most interesting problems in our national life. It leads us to a consideration of the duties of the generations of the present to those of the future. In other words, it brings us fairly and squarely to the eugenic question. While the venereal question is the paramount one of the present, unquestionably the eugenic question is the most vital one of the immediate future.

While we cannot cure the large percentage of the congenital weaklings that we have among us, we should be able to devise means to secure from future generations a comparative immunity from them. This is a duty we owe to posterity.

It is a well recognized fact that a farmer or horticulturist to succeed must pay every attention to the condition of his soil, the quality of the seed he plants, the character of the stock that he breeds. The horticulturist must select his plants most carefully to see that they are made free from noxious influences if his orchard is to be made a success. The question may be asked in dealing with human beings, "Am I my brother's keeper?" This question may be answered in the negative as regards the ordinary acts of the individual. The minute, however, a man so acts as to impose an increased burden on society at large, such act should be amenable to society's laws. The influence of heredity is being recognized by the law makers of many of our states. It seems to be dawning on the people of this country that it is necessary to control births among certain classes of society if we are to eliminate defectives in the present and future generations. Laws seeking to control undesirable marriages are now found on the statute books of fifteen states. Many of these laws are loosely drawn and easy of evasion. In some states, however, notably Michigan and Wisconsin, they have been made sufficiently stringent to help overcome some of the evils we seek to eliminate.

The law of Michigan may be taken as a model of the marriage laws that now exist. It reads that no insane person, idiot or person who has been afflicted with syphilis or gonorrhea and has not been cured shall be capable of contracting marriage. Any person who has been afflicted with syphilis or gonorrhea and has not been cured who shall marry, shall be deemed guilty of a felony and be punished by a fine not less than \$500 or more than \$1,000, or by imprisonment in the discretion of the court. Provided, in all prosecutions under this act a husband shall be examined as a witness against his wife, and a wife shall be examined as a witness against her husband whether such husband or wife consents or not. And provided further, that in all cases arising under this act any physician who has attended or prescribed for any husband or wife for either of the diseases above mentioned, shall be compelled to testify to any fact found by him from such attendance. It will readily be seen that from the drastic character of this law, the legislators of our country are beginning to realize the great importance of the venereal disease and also of the eugenic factor in marriage.

The importance to future generations of preventing transmission of insanity or other grave



conditions is just beginning to be realized. The necessity of cutting off certain congenital strains is seen by a study of the census of 1910. (c) Here it will be found that 841,244 patients in the United States were inmates of institutions for antisocial and unfortunate classes of the country. The number of those in these institutions is constantly shifting as the inmates and patients are only under custodial care for a few years. From this it may be seen that of the total number of persons living a much larger percentage has been legally committed to the state's custody than the census shows. Besides the persons who have been thus committed, there are many others of equally unfortunate hereditary qualities who have never been committed to such institutions. Many of these are taken care of by private means. From these classes come the progeny that means such a strain on future generations. To eliminate them it is necessary to cut off the inheritant strains that produce them.

While the enforcement of the marriage laws tends to prevent the union of such types we question if this is enough and fully believe in the endeavors that are made to eliminate these defectives by more radical means. To my mind this is a question of great importance and one of the most delicate we can be called on to decide.

It is not generally realized that sterilization laws have been passed by the legislatures of twenty-two states. In a few the courts have declared them unconstitutional. In some, like Washington, the primary aim has been punitive but in others, like California, the eugenic features has been predominant. In California the law is largely confined to the insane and feeble-minded and more than 1,000 operations have been performed in that state. We know absolutely that from these strains come the children that fill our poor houses, our asylums, our jails, our homes for feeble-minded and our murderers' cells, and there is no question that society would be relieved of a very great and definite burden if certain of these well defined classes were denied the power of procreation.

Personally, I am coming to believe that the sterilization of the hopelessly insane and the feeble-minded should be done. Perhaps further study will show that the process could be justly extended to include other classes with advantage. The importance of the subject is so great that it should be under national control. The method of sterilization should be most carefully studied. To my mind the use of the roentgen ray deserves very careful consideration. It is known that this will definitely cause temporary sterility in the human being and a further study of it should undoubtedly be made. If it were found that it could be made efficient it would

make the process very much easier and rob it of many of its offensive features.

Perhaps many of the views that have been expressed in this address may be regarded by most of you as too radical. Before the war one would hardly have dared to give expression to some of the thoughts that I have submitted for your approval. The war, however, has taught us to look on facts as they are and not as we would wish them to be.

The views expressed here are in many cases fundamental in character and I believe will stand the most careful analysis. Much of the time and energy of the medical profession has been devoted to the care of defectives. Every consideration is given to our insane, our feeble-minded and the reconstruction of our criminal classes. Little attention has been paid to the question of their elimination from the generations of the future. With the ever increasing strain of our national life the burden of these classes of cacogenic individuals is bound to become greater until the subject receives the consideration it deserves.

It has been a pleasure as well as an honor to be president of the Western Surgical Association for the year. This association stands for the best there is in American surgery throughout our western country, and I believe with the increase of membership it will become a more potent force for advancement of surgery in the future even than it has been in the past.

218 Lister Building.

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#### GOITER

JAMES B. WILLIAMS, M.D.  
JOPLIN, MO.

With the exception of cancer, goiter occupies the foreground in the field of research today. There are a few who cling to the old theory that goiter is due to certain soluble minerals in water—calcium, magnesium and iodine—maintaining that the incidence of goiter varies in proportion to the lime and iodine content of the water. This theory has been repeatedly exploded by the best men in the world.

Kocher, Poncet, Jaboulay, Klebs, Lustig, Carle, Waters, Plummer and others, after years of hard work on the subject, comparing one with the other's positive and negative findings, agree that goiter is due to some toxemia of bacterial origin. They found that the goiter streams of Switzerland differed from other streams only in the bacterial content, containing a superabundance of bacteria compared to other streams. Eighty per cent. of the rats drinking this water developed goiter. When

water from the same stream boiled was given the rats to drink they did not develop goiter. Possibly Kocher said most when he made the statement that the cause of goiter was due to organic substances in pathologic water rather than the water itself. It is thought by many that goiter is due to a family of bacteria which are ultramicroscopic.



Fig. 1.—Very large non-toxic adenoma. A detailed examination was negative except three pressure symptoms caused from the goiter: a sense of suffocation, dyspnea and whisper voice.

That the bacterial theory of goiter has been generally accepted for the present is evidenced at various clinics in this country. Two years ago I noticed in Ochsner's clinic that he was removing the tonsils and teeth in every goiter case where a focus of infection could be demonstrated. He stated that many times thyroidectomy had been avoided after having removed the offending focus of infection.

In thyrotoxicosis the gland becomes a pulp of blood and blood vessels; it is estimated that as much blood goes through a toxic goiter as goes to the brain. We know the thyroid to be the king of the ductless gland system. It is the "sparking machine," which keeps the endocrine chain firing, playing on the sympathetic system as the musician would the notes of the piano, burning up the food residue making the ash of the body. An abnormal stimulus lurking in the background, which we know to exist many times in physiological conditions as in menstruation and pregnancy, or the toxin of an infectious disease, may excite the gland to hyperactivity with an overproduction of thyroid secretion and the metabolic rate rises, which is proof that a toxic goiter exists.

Here we may say that we know that the thyroid gland puts out a substance or substances which antagonize the toxins manufactured by many infections. Sometimes the gland is called on for such an abundance of neutralizing ma-

terial during the process of a given infection that we have changes in the gland *per se* and the hyperactivity does not abate as the infection is wiped out, then the material manufactured by the gland which nature used to such good advantage during a certain disease becomes a toxin as it is poured into the blood stream and we have a toxic goiter. Nature now having to "bottle her own secretion" the degree of toxicity is registered by the metabolic rate.

In the metabolic rate has been discovered the key to the toxic goiter. If strictly observed many lives would be saved and the mortality rendered nil from thyroidectomy in toxic goiters. The metabolic rate is used today in toxic goiter with the same intelligence as the thermometer is in typhoid and pneumonia. If fuel is burned it gives off the same amount of heat irrespective of the place it is burned. If it is burned in the body we have the same amount of heat produced as if burned from



Fig. 2.—Same patient, presenting a typical case of exophthalmic goiter, following tonsillitis which she contracted 3 months after operation. Patient has lost 110 pounds.

a flame of fire. Boil a beaker of water over one bunsen burner, then set another burner under the water and we have immediately twice the amount of heat but the water stays the same temperature, 212 F. Toxic goiter has the same effect on the human body as the second bunsen burner does on the beaker of water, burning twice the amount of fuel in the body as would be



normal for that individual. The metabolic rate goes 75 to 90 per cent. above normal. This high rate in toxic goiter would represent a temperature of 106 in typhoid fever in comparing degrees of toxicity. Given a metabolic rate of 40 or 50 per cent. above normal we may operate with a fair degree of safety. If it should run 70 to 80 per cent. above normal and we should operate we would have a high mortality indeed. These desperate toxic cases are put to bed. Each week's rest usually brings down the metabolic rate 10 per cent. At the end of three or four weeks if the metabolic rate is not below 50, we should do a pole ligation. This usually brings it down 10 per cent.; then wait two weeks. If still above 50 per cent. ligate the other superior pole and send her home to rest three months. When the metabolic rate is above 50 per cent. we regard it very dangerous to operate; it might be designated as the dead line. Desperate cases are converted into good risk when this plan of treatment is followed.

Much has been learned recently regarding toxic goiter. We have two types of toxic goiters which are different entities of the thyroid gland just as pneumonia and tuberculosis are different entities of the lungs. The more common of the two diseases is the toxic adenoma; the less common is exophthalmic goiter. Certain definite symptoms characterize each disease but some symptoms are common to both. Toxic adenoma responds to treatment readily. Exophthalmic does not. Toxic adenoma is cured by operation. In exophthalmic operation rarely cures. In exophthalmic we get exophthalmus in about one-half of the cases but it is a late symptom. We have more nervous symptoms in exophthalmic goiter than in toxic adenoma. In exophthalmic the heart and many tissues undergo degenerative changes which can never return to normal. With toxic adenoma we have no degenerative changes. In both of these toxic states the patient will complain of being hot. Less clothing is worn, windows opened. The degree of toxicity in either disease is determined by the metabolic rate. Forty per cent. of the quiescent adenomata become toxic sometime in life. The case here cited is an example:

Mrs. A., aged 55, married, worked hard all her life, has had two children, both living and well. Mother and one aunt had large goiters. Her past history is negative. At the age of 14 she menstruated at which time she noticed a swelling in her neck. She has had two or three attacks of tonsillitis a year all her life and noticed that the swelling would get a little larger with each attack and she would be very nervous for a month thereafter, and the neck would not reduce in size but grew progressively until at present she has an enormous nontoxic goiter. Her heart and kidney are in good condition. Tonsils and teeth are very foul; says her teeth were always bad.

She has always refused to have her goiter operated until recently when she began to suffer from pressure symptoms: a sense of suffocation, whisper voice and dyspnea. Aug. 29, 1918, I did a lobectomy of the right side under 0.5 of 1 per cent. apothetin, removing the larger of the two lobes. She went home in five or six days feeling good. All the pressure symptoms disappeared in two or three weeks at which time she asked me to remove the other lobe. I refused because of the "flu" epidemic. While waiting for the epidemic to subside she developed tonsillitis (three months after operation), from which all the symptoms of exophthalmic goiter started: extreme nervousness, muscular tremor, very rapid irregular pulse. Two months later I called to see her and found all the related symptoms were exaggerated and marked degenerative changes had taken place. There was a marked mitral insufficiency, a very rapid irregular heart, a cloud of albumen, hyaline and granular cast. Exophthalmus was marked, and an uncontrollable diarrhea, a symptom which my friend, Dr. James of this city, had been called in to relieve. She is at present confined to bed and so nervous she cannot feed herself. Insists that she is too nervous and weak to let me do a superior pole ligation. She weighed 300 pounds three months after operation, her usual weight; she has lost 110 pounds in the last six months.

The case is reported because it illustrates many of the points I have tried to bring out in this paper, and while toxic adenoma is nothing uncommon to develop in this type of goiter, exophthalmic is very rare.

Frisco Building.

## INFECTION \*

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The subject of infection is too large to handle completely in such an article as would be expected in a meeting like this, for it extends through the whole range of medical science and scarcely any subject can be discussed with any degree of thoroughness without touching on it. I shall therefore only take it up in a general way and consider some of the principal underlying facts, barely referring to a few of the best known illustrations first, as concerns general diseased conditions, and then infection of wounds and their treatment, in the same general way without going far into details.

Infection is the implantation of a disease from some source outside of the body. Diseases so communicated are called infectious diseases, as distinguished from those diseases caused by some derangement of the physiological processes of the body without the implantation of any such outside causative agent.

\* Read at the meeting of the Southwest Missouri Medical Society, Springfield, Oct. 23, 1919, and of the Wright County Medical Society, Mansfield, Nov. 6, 1919.

The causative agent implanted in the body to produce an infectious disease is some low form of living organism, as bacteria, fungi, or protozoa, commonly grouped under the designation of germs; or some of the higher forms of animal life, such as trichina, itch mites, etc. These usually come from the bodies of other people or from animals affected with the disease, or from some insect that acts as an intermediary host, as in the case of malaria and yellow fever conveyed by the mosquito, typhus fever by the body louse, or the bubonic plague by the flea; or they may exist in the soil, as the tetanus bacillus, and gain access to the body through a wound; or they may be conveyed from other people through food contamination, as typhoid and tubercle bacilli; or through inhaling floating particles in the air, as the pneumococcus, and influenza and tubercle bacilli; or through a break in the skin, as syphilis and erysipelas; or be transferred by direct contact, as gonorrhea and syphilis; or from an animal by a bite, as rabies; or merely by contact, as glanders, anthrax or actinomycosis; or by eating the flesh, as trichina, echinococcus and tapeworm.

Many diseases are conveyed by germs that are very commonly present either in or on the bodies of those who have become immune to them by reason of an attack from which they have recovered and who thus act as carriers, by which the germs become scattered to those who are susceptible; or they may exist in or on the bodies of those who are more or less immune by nature but owing to some depressing circumstance have become susceptible.

The body is by nature more or less resistant to all germs. Some never gain an entrance to the human body to do harm, and are therefore harmless even though they are very deadly to some animals; and the reverse is also true. Some are always present, but never do any harm unless there is something to lower the vital resistance, as for instance, an abrasion or wound of the skin or mucous membrane, giving entrance to the staphylococcus and streptococcus which may then cause boils, carbuncles, and other conditions.

There is a constant warfare in existence between the hosts of invading germs and the defensive processes of the body. In case the body possesses a natural or acquired immunity to a certain organism it is not able to gain a foothold although it may exist on the surface of the skin or mucous membrane, or even in a wound, without causing any bad effects; but if the body be susceptible it soon enters deeper into the tissues where it multiplies in numbers and produces its characteristic effects in the form of some diseased condition.

As soon as this begins to take place the body

begins to produce antibodies for the purpose of destroying the invaders. If it is able to do this with sufficient effect, the increase of the disease germs is stopped and recovery takes place, but if it is not able to do this they go on increasing until death ensues. In case of recovery the antibodies remain for a time, or in many cases for life, and prevent any later repetition of the disease. This constitutes an acquired immunity.

The situation may be compared to a warfare between the soldiers of an invading army and those of the country invaded. If the country has an army strong enough to keep out the invaders it corresponds to a natural immunity. If not, the invaders enter and do more or less destruction. If the country is able to mobilize an army soon enough and strong enough to drive them out again the country is saved. If not it is destroyed. If it drives them out and its army remains on the frontier to keep them out it corresponds to a recovery with the establishment of an acquired immunity. If after a time, when the danger ceases to be so apparent, its army is demobilized it corresponds to the time following a disease when immunity has ceased to exist. As two or more armies attacking a country at the same time may be able to effect its destruction when none of them could do so alone, so some diseases may be able to destroy a body when some other cause has lowered its power of resistance when it could never have done so alone. This is no doubt the case with such diseases as pneumonia, typhoid fever, and tuberculosis, for we all are often exposed to the germs of such diseases yet we do not contract them unless some depression of vitality has made us susceptible.

Most infectious diseases gain entrance to the body through the mucous membranes, either the respiratory, as pneumonia, influenza, measles and whooping cough; or the alimentary, as typhoid fever and dysentery; or the genito-urinary, as gonorrhea; though a few may gain entrance through the skin. It is probable, however, that none can penetrate the healthy unbroken skin but must enter only through a wound, as rabies and tetanus; or by the bite of an insect, as malaria, yellow fever, typhus fever, and bubonic plague. There are quite a number of diseases that may enter by several different routes, as tuberculosis and syphilis.

The skin and mucous membranes are always inhabited by a great variety of organisms which in case of a wound are ready to set up an infection. The most common of these are the staphylococcus pyogenes albus and aureus, the streptococcus pyogenes, the bacillus coli communis, the bacillus pyocyaneus, the bacillus tuberculosis, the gonococcus, the bacillus typho-



sus, the bacillus diphthriae and the bacillus tetani.

In practically all accidental wounds and in surgical wounds where proper precautions are not taken, more or less of these organisms are brought in contact with the tissues of the body where favorable conditions are found for their propagation and immense numbers are soon found. Many of them are absorbed into the tissues to produce local effects or carried to distant parts of the body to produce constitutional disease, but even if the organisms themselves do not penetrate beyond the immediate vicinity of the wound their products almost invariably do, producing their characteristic symptoms, fever, malaise, and swelling of the part being characteristic of practically all of them. At the same time the organisms are multiplying in numbers and striving for an entrance, the leukocytes are increasing in numbers and gathering on the scene to head off their advance, and antibodies are being produced in the blood for the purpose of their destruction and to neutralize the action of their products. Many leukocytes as well as many of the organisms are destroyed along with some of the tissues and mixed with serum poured out from the capillaries to form pus which bathes the wound. The quantity and character of this pus varies according to the character of the organisms producing it and the condition of the patient.

As said before, if the system of the patient is able to conquer the invasion of the germs they are limited to the immediate seat of the infection and eventually driven out entirely, the wound heals and the patient recovers; but if not, they enter the blood in ever increasing numbers and are carried throughout the whole body producing a degree of septicemia which eventually paralyzes the vital functions and renders the system powerless to repair the damage done and therefore death ends the scene.

In order to prevent such a condition it is evident that the logical course to pursue is to keep all organisms out of all wounds made surgically, and here may be included the parturient uterus as well, and in the case of wounds made accidentally, and of all wounds that have become infected, the indication is to clean them as thoroughly as possible and then prevent any further infection by antiseptic and aseptic treatment.

To keep surgical wounds from becoming infected many ways are used, the object of which is to destroy or remove the germs on the skin and prevent their entrance into the wound, but perhaps the simplest and one reasonably effective is to thoroughly scrub the skin with water and germicidal soap, followed by painting with tincture of iodine and alcohol before the opera-

tion is begun. The hands of the operator and all instruments used must also be thoroughly sterilized and all dressings used after the operation must be rendered aseptic, preferably by heat.

In case of accidental wounds which are almost sure to be infected they should first be cleansed of all foreign matter, dried by gauze or cotton, and then painted with tincture of iodine. If the wound has become infected with earth from a densely populated locality, like the soil in a city, or place where domestic animals are kept, or soil fertilized with decomposing animal matter, the danger of tetanus is so great that anti-tetanus serum should be used to assist nature to destroy the germs that may be present.

If the wound be of much size, and especially if it be lacerated, the best after treatment is now considered to be with Dakin's solution of sodium hypochlorite, but this requires especial apparatus to keep every part of the wound continually bathed with the solution, even to the bottom of all cavities, by means of tubes put into the wound under the dressings, and it is hardly applicable outside of a well regulated hospital. Probably in general country practice and in other cases where such facilities are not available the chloramin solutions are better as they need only to be applied once or twice a day at time of dressing the wound and they accomplish about the same result.

In case a wound has become infected by improper treatment or other means and pus has formed all such collections must be afforded a free outlet and drainage and the circulation in the part be promoted by such means as bathing the part in water as hot as can be borne for ten or fifteen minutes several times a day and followed by a short application of cold water. The body should be aided in the production of antibodies by tonics and the use of mixed infection phylacogen, or a stock bacterin containing the organisms most likely present, or better yet, an autogenous vaccine. The wound should be treated aseptically and antiseptically with the view of preventing any additional infection to that already present as well as to aid in the elimination of that causing the trouble. In many cases the injection of a weak solution of tincture of iodine, or of iodoform in glycerin, into infected cavities will promote their healing. The affected part should be handled gently, avoiding squeezing and violent rubbing, which are likely to bruise the tissues and break down the leukocytic walls thus allowing the infection to enter the healthy tissues and make matters worse. The same caution should be borne in mind when the subject of curetting an infected uterus is under consideration, as it is capable of doing much harm when good is intended.

# THE JOURNAL

OF THE

## Missouri State Medical Association

MARCH, 1920

### EDITORIALS

#### THE JEFFERSON CITY MEETING

Our Association will begin the sixty-third annual session on Tuesday morning, April 6, in the legislative halls of the capitol at Jefferson City. It has often been mentioned among the members that the capital city should be our permanent meeting place but the subject has never been made a matter of discussion in the House of Delegates. Force is added to this sentiment since the completion of the new state house, which is so admirably suited to frictionless division of the work of the session. One of the objections to Jefferson as an occasional or a permanent meeting place is no longer valid, that is the question of hotel accommodations, for the Madison Hotel, which was for so many years the favorite rendezvous of visitors but had deteriorated woefully in recent years through frequent change of management, has now rehabilitated itself and presents such an attractive and inviting interior that it will undoubtedly win back very many of its old friends. With the Madison Hotel and the Central Hotel—the latter is headquarters—well fitted to utilize all their rooms, our members may plan the trip to the annual gathering with the expectation of obtaining comfortable hotel service. Of course the hotels will be crowded for we expect the meeting to surpass any other we have held, therefore it will be wise to secure rooms in advance by direct communication with the hotel. Rooms in private homes and in the Monroe Hotel will be available and those who desire to have the local committee of arrangements look after them should address Dr. W. A. Clark, chairman of the committee.

The committee on scientific work has arranged for the scientific session to begin on Tuesday morning in the House of Representatives and the House of Delegates to meet in the Senate Chamber on the same day. This arrangement has lengthened the number of hours devoted to reading and discussing papers and enabled the committee to apportion the number for each session so that, so the committee hopes, no contributor will have his allotted time cut

short and yet permit a thorough and unhurried discussion of each paper.

Taking heed from past experiences the program committee has left the afternoon of the last day open for any unfinished business the members may wish to carry over, for the train service out of Jefferson City discourages any formal program on Thursday afternoon. With reasonable promptness in beginning the sessions and not too much deviation from the rule that limits essayists to twenty minutes, the committee believes that every paper on the program can be read and receive a liberal discussion without the breathless haste forced on some members at past meetings, and the dirgeful motion "to discontinue the discussion on the remaining papers." The complete program will be found on another page.\*

The county society secretaries will meet in the senate lounging room at 4 o'clock on Wednesday afternoon. The councilors and members are invited to the meeting and by their presence and advice encourage these earnest workers, who are the bulwarks of the organization. The meeting will continue until 6 o'clock when the secretaries will gather at the Madison Hotel for their annual banquet.

On Wednesday morning Governor Gardner will have an opportunity to tell us what he thinks of Missouri doctors, for he has been invited to give us a little speech.

Monday, April 5, the Missouri State Roentgen Society will hold a meeting in the cloak room of the House of Representatives and members interested in their work are invited to attend. The society was formed at our last meeting and this is its first annual gathering.

Although the by-laws forbid anything in the way of an "official" entertainment it has been whispered that the committee on arrangements will not allow the occasion to be entirely mirthless.

The exhibit hall will present a variety of articles of interest to the practitioner and most of our old friends will be there to greet the members. The following have reserved space: A. S. Aloe Company, St. Louis, surgical instruments; Hanovia Chemical and Manufacturing Company, Newark, N. J., Alpine Sun Lamp; Hettinger Brothers Manufacturing Company, Kansas City, surgical instruments; Horlick's Malted Milk Company, Racine, Wis., malted milk; Medical Protective Company, Fort Wayne, Ind., malpractice insurance; C. V. Mosby Company, St. Louis, medical books; Physicians Supply Company, Kansas City, sur-

\* See page 174.



gical instruments and other paraphernalia; Radium Chemical Company, Pittsburgh, Pa., radium; St. Louis X-Ray Supply Company, St. Louis, Kelly-Koett X-ray units; The Borden Company, New York, malted milk; Thompson-Plaster X-Ray Company, Kansas City, X-ray apparatus.

### PROGRESS OF THE CHILD HYGIENE SURVEY IN MISSOURI

In February we commented on the health survey in Missouri inaugurated by the U. S. Public Health Service and our own state board of health as an initial experiment to determine if possible what standards might be established for the better education of parents and teachers in the conservation of child life. We now present a résumé of the work thus far accomplished that will be read with an intensity of interest calculated to stimulate the cooperating activity not only of physicians and health workers but of every one who is possessed with the spirit of helpfulness and anxiety to give the child of today a better chance to become a healthy adult than the child of yesterday had. The work is in charge of Dr. C. P. Knight assisted by Dr. Lydia A. DeVilbiss, with headquarters in the office of the state board of health at Jefferson City, and Dr. W. McNab Miller, secretary of the Missouri Tuberculosis Association, has been appointed associate director with headquarters at St. Louis. A diagrammatic chart showing the plan of field investigations is published on another page.

Up to March 1, child hygiene activities under the direction of the U. S. Public Health Service have been inaugurated in fourteen counties. The Public Health Service is putting on full time demonstrations in all branches of child hygiene activities in the following counties: Jasper, Greene, Cape Girardeau, Pettis, Howell. Each of these counties is supplied with a full unit for conducting studies in demonstrations in child hygiene, which includes prenatal investigations, infant and preschool child welfare, and an intensive survey in the schools.

Besides the full unit in these counties, surveys are being conducted in the following towns: Jefferson City, Columbia, Centralia, Warrensburg, Sedalia, Excelsior Springs, Liberty, Independence, Linneus, West Plains, Festus, Farmington, Troy, Montgomery City, Springfield, Joplin, Webb City. The school survey in these towns includes height and weight taking, physical examination of school children, and nutrition clinics for undernourished children. This is termed a "Mother-Child Nutrition

Clinic," wherein the mother and child are seen together in the clinic and advice given to both, relative to nutrition and correction of physical defects.

The Mother-Child Clinic is of distinct advantage in that it places a check on the child, and *vice versa*. Most of the distressing conditions among school children are caused by malnutrition, due largely to misinformation and thoughtlessness, ignorance as to correct diet, etc., and these Mother-Child Clinics were inaugurated with the idea of correcting such conditions. The conditions in Missouri are no different from those to be found throughout the United States, and reports from various cities show that undernourishment in children is on the increase. The greater percentage of these is not due to the high cost of living nor to poverty, as a partial survey in Missouri has shown.

Cooperation with the division of child hygiene in these school surveys is the extension service of the University of Missouri, represented through the home demonstration agents and the department of home economics, the University supplying home demonstration agents and nutrition specialists from both divisions. Cooperating with the service on the state-wide basis are the Missouri Tuberculosis Association, American Red Cross, and the University of Missouri, while great interest in the work has been shown by the county medical societies throughout the state and they are giving their full cooperation in conducting these activities.

Several towns and counties have raised funds for the purpose of putting on full time nurses for infant and child welfare. Wherever communities have been investigated relative to projects in child hygiene, generous responses from all of the civic organizations have been noted. Requests are received practically daily from different counties for demonstrations to be conducted.

Plans have practically been completed for a state-wide birth registration test, and an attractive "Baby Book" is being published for distribution to all homes wherein a birth is reported. This book is expected to have far-reaching influences in the matter of health education and health protection of the young.

Culminating these activities will be the baby health centers during the summer months, with special reference to counties not having a full U. S. Public Health Service unit in operation. Clinics will be held during June, July and August for babies and children of the preschool age. These centers will be under the supervision of a child specialist, assisted by a Public Health Service nurse and nutrition specialist.

All the children will be examined and a score kept. Attendance at two or more clinics entitles the mother to a score for her baby. Cooperation will be asked of the county medical societies, school committees, clubs, and other progressive organizations for work in the health centers. By this plan, thousands of children can be reached and observed during the summer months.

#### ST. LOUIS MEETING OF THE AMERICAN SURGICAL ASSOCIATION

St. Louis is fortunate in having been chosen as the meeting place for the forty-first annual gathering of the American Surgical Association, an occasion that will hold exceptional interest for the medical profession of the entire state. The meetings will be held on May 3, 4, and 5. This organization was founded in 1880 by Dr. Samuel D. Gross when forty-seven surgeons from all sections of the United States met in the College of Physicians and Surgeons in New York and adopted a constitution and by-laws proposed by Dr. Gross and he was elected its first president. It was then known as the American Surgical Society, but at the meeting in Richmond in the following year the name was changed to the American Surgical Association and those constituting the membership were designated as "Fellows" instead of "Members." In the list of charter members whose names were affixed to the constitution at the time of its adoption the only Missourian that appears is John T. Hodgen, St. Louis.

Dr. Gross made his first effort to form the association in 1879 but the discussion at a conference which he had called was decidedly unfavorable. At that time the opinion was expressed that the movement had the character of an attack on the American Medical Association, the claim being that all progress in surgery should be accomplished through the Surgical Section of the American Medical Association. Dr. Gross, however, believed that the organization of an independent body of surgeons who had attained scientific distinction in surgical practice would develop the work of the Surgical Section of the American Medical Association and stimulate its growth, a prediction that is amply verified by the commanding position of the Surgical Section of the American Medical Association today.

The purpose of its organization and the qualification of those who should be eligible for Fellowship are clearly set forth in the following clauses of its constitution:

1. The object of the Association is to promote the development and growth of surgical science and the welfare of the human race.

2. Candidates eligible for election as Fellows should have made some reputation as author, teacher, practitioner or original investigator.

In the beginning the Fellowship was limited to 100 in number; later this was increased to 125, and still later to 175, which is the maximum Active Fellowship allowed today. In addition there is a limited number of Senior Fellows and Honorary Fellows.

St. Louis was honored in 1897 when Dr. Theodore F. Prewitt was chosen president of the association. In the list of Fellows now deceased, besides Drs. Hodgen and Prewitt, appear the names of Drs. Elisha H. Gregory, Henry H. Mudd, and Frank J. Lutz. The Active Fellows from Missouri are Drs. N. B. Carson, Harvey G. Mudd, Major G. Seelig, and Vilray P. Blair of St. Louis, and J. F. Binnie and Jabez N. Jackson of Kansas City.

This is the Association's first return to St. Louis since the meeting held in 1904.

Dr. John F. Binnie of Kansas City is one of the vice presidents of the Association, the president being Dr. George E. Brewer, Professor of Surgery in the College of Physicians and Surgeons, Columbia University.

Dr. H. G. Mudd is chairman of the committee of arrangements.

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#### "UP FROM INSANITY"

Under the above title there appeared in the November *Atlantic Monthly* a narrative of supposed adventures in the land of insanity. Should we run across such an article in one of the now many popular short story magazines we would probably pass it by without serious thought, but one expected better padding within the *Atlantic* covers.

The author, "E. J.," realizes that he is "almost a pioneer in this field of written experience of insanity"; he believes it the privilege conferred on few to recover from insanity and on this account feels his responsibility to be accurate. He believes that his brain tissue was renewed, that insanity is paralysis of the mind and weakness of will, and he says he will attempt seriously to show that the center of the mind is a separate functioning organ. He believes in the seven year cycle of life's course and expatiates at length on his own case in this regard. With much color and ornamental verbiage he describes vaguely the episode in his experience on which he bases his article and which he has



labeled insanity, the ultimate curse of God. Incident to this episode "undoubtedly some collapse of tissue had occurred." From this experience he comes over "a long and thorny road to be your instructor." He had his "lucid moments" in good literary style. He runs amuck of occult phenomena and spiritual things eventually, and himself develops a surprisingly capable (in his opinion) sixth sense which seems to be made up largely of his own egotistical belief in his own abilities. All sensation, the whole mental life, was confined to the frontal area of his head until a new area of brain opened up and he began to think deeper (physically). He discovered a double nerve center at the base of the spine, the function of which brought balance and poise and strength that was instantly reflected into every movement and thought.

But this is enough to illustrate the type of matter with which the article deals and when it comes to believing we literally are as the author suggests, "from Missouri" in this instance. The whole thing is a poorly put together mixture of opinions, deductions (or concoc-tions) and half baked theories. "E. J." is far from being a pioneer; there are other and worthy attempts along this line as the opportunity is not a privilege conferred on few. "E. J." apparently believes in the old exploded adage, "once insane, always insane," to which he would pose as a glaring exception due to the exercise of some phenomenal will power of his own (hypertrophied ego). He has admitted his responsibility to be accurate and possibly from his lack of knowledge he has done so as nearly as he could but we are still "from Missouri." The editor remarks that pains has been taken to verify many of the facts. Ordinarily it would be quite difficult now to "verify" the "facts" of such an occurrence twenty years old. Does the editor wish it understood that he verified the disintegration and renewal of brain tissue, the existence of the double nerve center at the base of the spine, or the existence of personality in layers? There is no basis in fact for the belief of a renewal of brain tissue such as he intimates. His centers of will and of mind take us back to the abandoned facultative psychology of by-gone days when the brain was supposed to be composed of many separate organs each with its special function. It is really too bad that his double nerve center at the base of the spine has been demonstrated by no one else as yet; it must be a wonderful thing, from what it did for him.

Were it not that articles such as this are

certainly poor reading matter for the lay public, space in these columns would not have been given for this comment. Mental hygiene is endeavoring to instruct the public away from mythical brain centers, seven year cycles, the relationship between the upper lip and mentality (shall we assume the editor investigated this "fact"?), and a lot of other similar foolishness. We possess considerable knowledge concerning insanity today and in view of this knowledge it is lamentable that the lay press continues to feed the public with such garnished fairy tales as exemplified by the article under reference. We would not here impugn the good motives of the author but we might suggest that his little personal experience is not enough training to enable him to understand "insanity" nor to act as the instructor of the public in the subject. And further, to him a helpful criticism would be, stick to a narrative of the facts (which in his article are exquisitely few) and leave out the embellishing and decorating opinions and conclusions. The author's knowledge of his subject is obviously too painfully limited to make his article worth while other than as an example of what should not be.

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#### THE NEW BRITISH AMBASSADOR— A PHYSICIAN

English criticism of the British ambassadors heretofore accredited to this country has not been of a friendly nature, the appointees, according to the critics, not being the right sort of men to fill so important a position, and moreover, being men with but a small knowledge of American institutions and of American peculiarities, as evidenced in politics, in society, and in the general conduct of this country, whether the conduct pertained to home or foreign relations. Hence—and again we are voicing the critics—with the exception of Lord Bryce the British government has invariably sent to this country men who were opposed to learning the important lessons incident to their environment so that profit would result to the relations between this country and England. In fact, so say the critics, the "feeling" which still exists in certain quarters between America and England can easily be traced to the gaucheries of the various British ambassadors, who, stubbornly indifferent to the American spirit, have plainly shown that their insularity was of such density that it was nigh impenetrable. A recent English critic, Mr. A. G. Gardiner, writing in the *London Daily News*, gives vent to his innermost thoughts on the subject; and what he says is a

complete justification of any "feeling" in this country towards England at present, since each and every ambassador, with the exception of Lord Bryce, has been the wrong man because of his nonadaptability to American customs and his purblindness to see things from the American standpoint.

That England is awaking to the fact that her mistakes in the past have brought her discredit, as judged by Englishmen in a position to know, and that she is desirous of righting matters so that the most meticulous English critic will be favorably impressed, is evidenced in the appointment of Sir Auckland Geddes to the ambassadorial post at Washington. The new ambassador has much in his favor to make the right sort of impression in Washington and throughout the country. In the first place, he is a medical man of distinction, and while his training was received in Edinburgh his knowledge of American ways and customs cannot be a negligible quantity, his nearness to us after he became professor of anatomy at McGill University in 1913 being instrumental in enlightening him. Sir Auckland's activities during the war were of the best, and so thorough and efficient was his work when he entered military service at the outbreak of the war and was appointed director of recruiting and later on minister of national service, that England was loath to give him up again to Canada in 1919 to fill the position of principal of McGill University; hence his return to the university he had honored with his presence was given up. No doubt after he was appointed president of the board of trade Sir Auckland felt that his proper sphere was in England and in the province of statesmanship, and that his judgment was not at fault is shown by the high office to which he has just been appointed.

For many years this country has sent a literary man or a man of literary proclivities to the Court of St. James, and no matter how greatly and disastrously politics entered into the appointment of ambassadors to other European courts, the English position was kept clean and thoroughly unaffected even by the slightest odor from the Augean stables of home politics. And the result is that we have an untarnished page that can be read at all times with joy, and is a counterblast to any criticism of an unfriendly nature which might be offered by politician or business man in this country when the mood on him is disgruntledness on account of his non-recognition in connection with the highest ambassadorial position this country has in hand. Lowell, Hay, Choate, and Page carried to Eng-

land only the best of Americanism, the sort that is appreciative of the culture of the Old World and yet not subservient. They were representative men because they illustrated the crest of our culture and its important derivations from the English parent-root, and they were representative men because their culture was of the sort which, no matter what its environment, is always recognized at once by cognoscenti as part of the world culture.

No doubt the new ambassador will make amends for England's past persistency in sending to Washington financiers and statesmen who were more insular than politic and who were never too gracious—a most enviable fault in an ambassador. His attitudes, we take it, will be those of an appreciative guest who is never forgetful of his host's natural sensitiveness and his host's desire to make him feel at home. His culture, his medical learning, and his knowledge of men, will stand him in good stead, and that his view in all matters will be broad and comprehensive need not be emphasized here. He will not be a stranger in a strange land—not a son of Heth—but the welcome guest whose ways are attuned to ours. And that he will cement the friendship between this country and England is a foregone conclusion, even though some wight, writing for the press, may pose as an historian because of his deep knowledge of George III!

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#### A NEW DIVINE HEALER

If you are a plain man—that is one who has only plain thoughts—you are one of a hundred or one of a thousand without any distinction and without any fame. You are reckoned by your friends as the sort who is dependable but not exciting; as the sort who will lumber on from year to year until the Grim Reaper gets his inning. But if you are the opposite, no matter how or by what means you reach the goal of attracting attention to yourself, a dozen or so of men, or perhaps a hundred and even a thousand, will single you out as something exceptional. They will say that you are above the crowd, that you are the happy possessor of talent; and even though under pressure they admit that your talent is not genuine, great praise will be bestowed on you for making "good" despite the drawback resulting from the absence of a talent that will bear close scrutiny. In short, your reputation is made so far as your local "fame" is concerned, and you may stop in your wild career at deception of the few, or, if you are vain, you may continue.



Let us suppose that you are ambitious enough to continue and that while you are progressing step by step it occurs to you that to hold the esteem of your friends you must do something out of the ordinary. You are not inclined to study; you have not the inclination to become a financier; your literary proclivities are nil, hence you know that in case you take up literature failure will be written large across your name. You look around and you note that your credulous friends who pinned their faith to you are not unlike hundreds and thousands of other men, and the idea occurs to you that if your friends were so easily won, why not win the respect of the outlying hundreds and thousands who are still ignorant of your so-called talent? So one scheme after another occurs to you, and if your penchant is along religious lines you take up Christian Science; and if it is along bastard medical lines you take up chiropractics or osteopathy; and if you feel within yourself that your so-called talent can be the means of alleviating suffering by completely bamboozling the public you become a divine healer!

Mr. Frederick L. Rawson, who is at present touring the country, is the latest divine healer—the rightful successor of the “phenomenal” Krauss and the “marvelous” Schlatter. He can cure blindness by the laying on of hands and prayer, and cancer, tuberculosis and any and all diseases that have baffled the ingenuity of our greatest scientific medical men. And he can do these marvelous things through touch and prayer, or to be more scientific, medically speaking, by increasing the powers of resistance on the part of the afflicted one through the strength that must necessarily come to him through prayer from within, accompanied by a full orchestration of prayer and touch from without. A deal has been mentioned in medical writings in these latter days about the powers of resistance, and much has been said of the beneficial results to the patient in case his powers of resistance are increased. But no medical man, no matter how strong his belief may be in the good that results from an increase in the powers of resistance, has ever had the temerity to advance the thought that the said powers of resistance can cure blindness, cancer and other diseases of like severity. It has remained for the divine healer to play with this thought and to play with it in the manner in which all quacks play with thoughts which are of the flimsiest fabric when closely scrutinized.

Credulity can stand any strain, it would seem, and when we say credulity we do not desire to convey the idea that we are limiting ourselves

to the credulity of the ignorant. In the case of Mr. Frederick L. Rawson, we have no doubt his “greatest” cures will be effected among the educated, for it is always the educated who want something “new” in medicine, in literature, in science, so that they may babble thereof in the most superficial manner, not only in their family circles, but in halls of “learning” that invariably bring frowns to the fair face of science.

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## OPINION AND CRITICISM

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### A MUNICIPAL TRAINING SCHOOL FOR PRACTICAL NURSES

In every community that has reached beyond the hundred thousand mark there are many families who at times require practical nurses, for the reason that their circumstances are such that to employ special nurses is beyond the limits of their exchequer. Practical nurses are a need even in families of means when the illness is of such a nature that the need of a specially trained nurse is superfluous. In fact, the matter of nursing in a large number of instances is not a matter of science, but purely one of having the right sort of woman at the bedside of the patient. And, the right sort of woman is not always the specially trained nurse but the nurse whose humanitarian qualities have been developed to the degree of understanding the wants of a patient and a patient's desire to be made as comfortable as possible through ministrations which are humane and just.

As matters stand today only the wealthy can afford to employ trained nurses; and that only the wealthy are in a position to do so, means unmistakably that the art of nursing is a luxury and therefore not of the widespread good it should be in every community. To combat the high cost of living, as illustrated in the employment of specially trained nurses, and to help the hundreds of families who need the presence of a practical nurse several hours during the day or for that matter a half day, a municipal school for the purpose of training women for practical nursing has been proposed for St. Louis by Mr. John Schmoll, Director of Public Welfare, following a conference with Dr. Cleveland H. Shutt, Hospital Commissioner.

A step in the right direction is this undertaking and one that can invite only the kindest criticism. The course will last two months and at the end each nurse will receive a diploma which will set forth her qualifications as a practical nurse. She will be equipped to nurse in families who, as stated above, will not require

specially trained nurses; and, best of all, in emergencies, such as was the recent influenza epidemic, when there was a constant demand for nurses day and night and physicians and the health department were powerless in supplying them, her services will have a value that will be undeniable. To enumerate how often her services will be needed, whether the town is stricken with an epidemic or is in a normal state, would take up too much space and would no doubt bore the medical reader, especially the medical reader who has all along wanted a practical nurse for some of his cases but was unsuccessful in finding one that would fit the part.

Practical nursing, such as heretofore obtained in our large cities, has been in the hands of inexperienced women of no education and no training. They have picked up their knowledge, such as it is, by pure accident and, when employed as they have been by reputable physicians in stress of circumstances, have proved decidedly inefficient. The day of Sairey Gamp, immortalized by Dickens, will never be over so long as we do not have a municipal training school for practical nurses, and that "her" day should have ended long ago but is still as bright as when Dickens made mock of her, is a chapter in the slow workings of our civilization which should make us hang our heads in shame. But the horizon is not dark now; and what with the luminary of the proposed training school peeping above its edge, the citizens of St. Louis should be heartened. When the complete realization of the thought is effected, no greater boon could be bestowed on St. Louis; for it will mean that the now lowly "art" of practical nursing has been wrested from the hands of the inexperienced and will be placed on a plane that will be high enough to engage the attention of all those who, on account of their knowledge of and experience with practical nurses in the past, have been most severe in their judgment to curtail their patients' expenses by recommending certain practical nurses of the brew we have today, and the health department which, when sorely tried in its quest for nurses, has had some bitter experiences along the same lines.

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#### STANDARDIZING OPHTHALMIC PRACTICE

For the purpose of standardizing and improving the training for ophthalmic practice, the American Board for Ophthalmic Examinations came into being. There are three representatives on the board from each of the three well known and established ophthalmic organiza-

tions, viz.: The American Ophthalmological Society, The American Academy of Ophthalmology and Otolaryngology, and the Ophthalmological Section of the American Medical Association.

It has long been recognized that the training for ophthalmology has not been definite, systematized or standardized. Unless one had the advantage of a connection with a well equipped and well conducted clinic, or was so fortunate as to serve an internship in a recognized eye hospital or, still better, a long assistantship to a leading ophthalmologist, one's training was apt to be ill conducted and incomplete. Under such conditions the aspirant was left mostly to his own devices and his professional equipment was largely a matter of self-training. Unfortunately too many were satisfied with a six weeks or other abbreviated course. To remedy this the American Board for Ophthalmic Examinations has established certain standards to which all candidates must conform and which will in time elevate this specialty in the esteem of the profession and public to the high level to which it is entitled.

Up to January, 1920, the board has conferred its certificate on 139 ophthalmologists. The time is not far distant when the possession of this certificate will be a *sine qua non* for admission to certain ophthalmological organizations and for appointments, public or other.

The board will conduct an examination at New Orleans in April during the session of the American Medical Association. Those desiring to take the examination should apply for blank application form to the secretary of the board, Dr. William H. Wilder, Chicago, Ill.

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#### "ASK OUIJA"

It was with deep regret that we received the startling bit of information that Mrs. John H. Curran, known to the reading world as "Patience Worth," had decided to give up the ouija-board (literally: Yes, yes: French, oui; German, ja), and from now on would receive her extraordinary messages from the greatly talented and all-knowing "Patience" of the other and better world without the intervention of a piece of wood. When we say that our regret was deep we hardly express the tumult of our emotions, for just when Mrs. Curran decided to give up the "board" we had decided to arouse the medical world to the importance of using it in the matter of arriving at correct diagnoses when, as so often occurs at consultation, a welter of opinions arises, or in connection with the



final solution of those baffling diseases, cancer and tuberculosis, which have tried the patience of the most efficient laboratory workers throughout the world. When the "marvelous" happenings first occurred to Mrs. Curran we thought lightly of them; in fact, we scoffed at the idea of there being anything extraordinary about her performances; but with the passage of time and after a number of her books were published, conviction as to the genuineness of her literary output drove talons of great strength and of ineluctable clutch into our consciousness. Hence the reader can easily understand that "Patience Worth" and not at all Mrs. Curran has played us a sad prank, for just when we were on the eve of startling the medical world with a new and "glorious" idea as to how to make the practice of medicine easy and the discovery of cures just as easy, "Patience" announces her lack of faith in the "board" and disclaims its worth and value.

Think of what great benefits might have accrued to medicine if "Patience Worth" had not been so truthful about the uselessness of the ouija-board! Our consultations would have resolved themselves into a message of simplicity from, let us say, Dr. Radcliffe, who was in attendance on King William and said to the royal patient: "Your juices are all vitiated, your whole mass of blood corrupted, and the nutriment for the most part turned to water;" or from Drs. Mead, Askew, and Pitcairn, all extraordinary planets in the English medical firmament in the eighteenth century—and great would have been our profit! The messages may have been somewhat involved, due to the un-American English spoken in those days, but how simple they would have been nevertheless, stripped of the multifarious findings which today are pouring out of each and every laboratory throughout the country! Again, we would be back into the land of pleasance, where brows are never furrowed, where eyes are never dim from too much study, where brains are never weary from too much cogitation. What a boon the "board" might have been, not only to the much-perplexed physician, with or without the help of laboratory findings to steer him into the right waters, but also to the patient, for no longer would he have to wait some twenty-four hours for the joyful or sad message from laboratory, but at once learn from his attending physician the nature of his ailment. But, better still, the ouija-board would have been instrumental in telling the physician breathlessly, "Yes, yes," just what the financial status of his patient was so that he could mentally calculate

what said patient meant to him as a liquidator of some of his outstanding bills. Hence it is with sighs that we record the death of the ouija-board, the saddest death which has taken place so far this year.

## BOOKS FOR LEISURE MOMENTS

*Reading with discrimination broadens the mind  
and strengthens the mental grasp*

THERE are many books published each year and out of the number a few have the stamp of having been conceived out of the heart of the writer. This limited number of books arrests attention; they go straight to the reader's consciousness; they make an impression which books conceived otherwise never do. To the number just mentioned belongs "A Labrador Doctor," by Dr. Wilfred Grenfell (Houghton Mifflin Company, Boston and New York), and a most honorable position it has. Dr. Grenfell's whole life has been devoted to the betterment of poor fisher-folk, not only as regards their housing and general hygiene but also as regards the medical care which they were not the beneficiaries of before he entered the field to bring them back to the civilizing advantages of having among them a guide who would work unselfishly on their behalf. We have often read of the self-sacrifices of men and women in the slums of large cities, incident to a life of complete devotion to the "uplift" of the poor and the social outcasts, and we have admired the self-sacrifices and have praised in a loud voice the physical and mental endurance of those who have dedicated their best years to this sort of work. But what these men and women have done and are still doing is as nothing compared with the civilizing work which Dr. Grenfell has done at the sacrifice of personal comfort and with no thought of any praise. In fact, the scenes of his activities were far removed from the beaten path, were so distant from the routine of life that only after years did the world hear of his great work. The workers in the slums tear down and then rebuild, whether character or houses: they are always abetted in their work by a few sympathetic friends who give them words of cheer, or what is better in the prosecution of their work, money. Dr. Grenfell plunged into a region of the earth that required building without the preliminary tearing down, and no friends were in his immediate vicinity to cheer him on either with words or money. His idea was to go among those who were cut off from civilization, as we understand it to be

in our homes of comfort and refinement, and make them feel that their geographical isolation and their poverty and the humdrumness of their lives were no barriers to their affiliation with the rest of mankind. That he succeeded in his endeavors is apparent to every reader of his epoch-making book, and that he succeeded as few could have done is also apparent. Every physician of intelligence should have this autobiography in his library, for by having it around it will be a solace and the right sort of tonic when the spirit moves him to gather from another, heartening words of courage and determination to combat the depressing effects of his own routine and somewhat self-sacrificing life.

P. S.

It would seem that only an intelligent foreigner can grasp the various threads which make up the web and woof of a nation or of an individual in a way to halt one's attention and call forth admiring remarks. The best history of English literature was written by the Frenchman, Taine, and the best biography of Walt Whitman by another Frenchman, Leon Bazalgette. The real Lincoln has recently been interpreted by the Englishman, John Drinkwater, and the interpretation is far ahead of any so far offered by an American writer. In the same category of authors who have pierced the superficialities of the individual and have sunk their shaft so deep into the lowermost strata that complete light is thrown on motives, actions, and the why and wherefore of "natural" enthusiasms and "natural" bias, should be placed Daniel Halévy, the Frenchman, whose recently published "President Wilson" (John Lane Company, New York), in an English translation, has not been accorded the reception so illuminating a study deserves from the public. The complexities of President Wilson's character are gone into in a calm and conservative manner, and while there is no whitewashing of faults, there is, on the other hand, no complete condemnation of them. The life of a man does not begin when he enters a public career, but many years before, and it is just these chapters in the book before us which enlighten us as to some of the nonunderstandable acts of President Wilson in trying and greatly involved circumstances. It is easy to say that one's early years of training would not affect one's decisions. The French author has the faculty to read aright the motives which actuate the statements, attitudes and obscurities of President Wilson's careful and stubbornly-held policies in the face of adverse criticism; and he has this faculty because he writes ob-

jectively and also because of the fact that he is a foreigner of mental parts which are above prejudice. A clear and concise picture we get of President Wilson up to the time this country went into the war, and the limning is done by a hand that is always under the control of a student of psychology whose main currents of thought are "oxygenated" in the clearest of atmospheres, leagues above the rancor and mean intent of the groundlings.

P. S.

## NEWS NOTES

DR. HUGH F. KERR of Springfield has been appointed deputy state commissioner for Greene County.

DR. E. LEE MYERS of St. Louis has resigned from the staff of the St. Louis College of Physicians and Surgeons.

DR. H. L. RATLIFF of Webb City, superintendent of Jackson County Tuberculosis Hospital, has resigned that position and moved to Dallas, Texas.

DR. KATHERINE L. STORM of Philadelphia has removed her office to 1701 Diamond Street, Philadelphia, a new building which Dr. Storm has purchased and equipped with every facility for quick and exact work.

THE Abbott Laboratories invite members attending the American Medical Association meeting at New Orleans to view the motion pictures that Abbott will display showing the surgical uses of dichloramine-T and other pictures of recent medical and surgical procedure.

THE American Child Hygiene Society will hold its next annual meeting in St. Louis, October 11-13. Extensive plans are being laid to make this session one of the most important ever held by the society. Dr. Borden Veeder is chairman of the committee on arrangements.

A RECENT ruling of the postoffice department withdraws the franking privilege under which specimens could be mailed to state laboratories without the payment of postage. In future



specimens sent to the state laboratory must have stamps affixed to the package to prepay the postage.

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WE have had additional requests for physicians to locate in communities needing medical advisers. Physicians contemplating a change in location should address the following: William R. Seaton, Route 1, Box 40, Meta; Dr. W. T. Wiles, Bakersfield; Mrs. Catherine Zuppann, Box 4, Ballwin.

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DR. A. W. McALESTER AND DR. WOODSON MOSS of Columbia have been elected honorary active members of Boone County Medical Society in recognition of their long and distinguished service in the profession and as an expression of the esteem in which they are held by the members of the society.

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THE National Pathological Laboratories have established a laboratory in Detroit, and Dr. Paul G. Woolley of Cincinnati has accepted the position of director. Dr. Woolley has been professor of pathology in the University of Cincinnati since 1909 and was dean of the college of medicine for several years.

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IN the fire which recently burned a portion of the pathologic building of the Johns Hopkins University, the records and valuable data gathered during the past two years in research on the cause and effect of influenza made by Dr. Thomas M. Rivers, were lost, and the laboratories of Dr. Bayne Jones and Dr. Lloyd D. Felton, containing important apparatus and data, were destroyed.

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THE death of Dr. Charles Zuppann of Ballwin opens an opportunity for a physician who would enjoy rural life to take up an established practice in a well settled community holding a large circle of substantial people. Ballwin is eight miles from Kirkwood with good roads to that town and St. Louis. Any physician desiring to know more about the prospects of this opening should address Mrs. Catherine Zuppann, Ballwin, Mo., Box 4.

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DURING February the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Nonproprietary Articles: Eucatropine; Phenacaine.

Gilliland Laboratories: Gonococcus Vaccine (Polyvalent) (Gilliland); Staphylococcus Vaccine (Albus and Aureus) (Gilliland).

Werner Drug and Chemical Company: Eucatropine-Werner; Phenacaine-Werner.

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DR. JOSEPH N. FERGUSON of Sedalia, father of Dr. W. J. Ferguson, Councilor of the Seventeenth District, died at his son's home, March 6. Dr. Ferguson was formerly very active in the practice of medicine at Sedalia but had been in retirement for a number of years. He was born in Bloomfield, Ky., in 1836, and studied medicine under Dr. C. B. Case, a prominent physician of Washington, Ky. In 1860 he entered the medical department of the State University at Louisville from which he was graduated. He was 84 years old at the time of his death.

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THE Illinois Central Railroad is the only line out of St. Louis carrying through cars to New Orleans for the meeting of the American Medical Association. The fare for the round trip is \$41.06, if purchased before April 30, the return limit extending to May 31, by another route if desired. Members expecting to attend the meeting at New Orleans should plan their journey early enough to enable them to secure berths, the accommodations on the fast train being limited. This train leaves St. Louis on the Illinois Central at 4:30 in the afternoon, arriving at New Orleans at 11:15 the next morning. Another train, a little slower, leaves St. Louis at 9:56 p. m., arriving at New Orleans at 8:45 the next evening.

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DR. O. P. McPHERSON of Kansas City has recently received "the Medal of the First Order of St. Sava," the highest Serbian honors bestowed on foreigners. Dr. McPherson left this country with Base Hospital No. 85, and the day after he reached Paris was assigned to the American Military Red Cross Hospital No. 5 in Serbia. He established two hospitals, the first of fifty beds was turned over to the Serbians after thirty days. The 100 bed hospital was operated by Dr. McPherson and two American nurses. The recognition of his valuable service was given in a note from King Peter, and the presentation of the medal was by Prince Alexander. Dr. McPherson was in service from Aug. 27, 1917, to July 2, 1919.

News from Professor Pawlow, the Russian scientist, was recently published in *Science* in the form of a communication from Prof. F. G. Benedict, which we quote:

"Knowing the keen interest of all American men of science, and particularly physiologists, in news from Professor Pawlow, I hasten to send herewith a paragraph from a letter recently received from a well known physiologist in the south of Russia. For obvious reasons the place and name had at this time best not be made public.

"In August of 1919 Prof. J. P. Pawlow was still alive in Petrograd. He begged his friends [in Kieff] to send him some provisions, as he was starving. At the end of his letter he writes: 'Instead of science I am busy peeling potatoes.' I know nothing about him at present (Jan. 17, 1920), as the north has been severed from the south by the Bolshevik invasion."

"Ever since the false announcement of Professor Pawlow's death a few years ago all his friends have been anxiously awaiting word from him. The above is indeed pitiable but at least indicates that he was living seven months ago."

NATIVE doctors in parts of Poland—who are also the barbers—have only one rule of practice when confronted with a patient who still shows signs of life. Is he sick? Bleed him! And they forthwith apply leeches. If the man gets well, the barber-doctor has accomplished a miraculous cure; if he dies, it is the will of God. Recently this ancient system of practice has been violently overthrown. American Red Cross doctors and nurses came into the district and found typhus and many other diseases flourishing, with no medical attention except that which the barber could bestow. An American hospital with all modern medicines and equipment was installed and the barbers have begun to lose the medical and surgical end of their practice. Their aid was enlisted, however, in closely shaving bewhiskered men and clipping short the hair of those who were infested with vermin. Just now, after weeks of strenuous medical campaigning, headway is being made against the disease which the barbers' leeches had so long failed to cure. Leechcraft has gone out of fashion in Poland.

It was a great gathering of the medics at the City Club (Kansas City), Thursday, March 4, to do the honors for the five members who have done their fifty years so splendidly. One may always be sure nowadays that any enthusiasm and cheerfulness that develops at dinners is due to real pleasure and enjoyment. (Memories of Academy banquets R. I. P.) There was the charming Dr. Jefferson Davis Griffith—otherwise and more generally known as J. D.—

surrounded by friends within and without the profession. And Dr. Mott, with out-of-town guests at his table. And Dr. Wilson with his contagious smile lending a genial atmosphere at his table. It was regrettable that Dr. Rogers and Dr. Thornton could not be present. Their tables were surrounded with old friends, who missed their presence. The Scotch toastmaster—yes, Dr. Binnie—was in good form; the introductions and presentation speeches were quite appropriate. The loving cups made a most auspicious display and every one regretted that they could not be more hilariously and tastefully bestowed. The attendance was a compliment to the guests, for there was a larger number present than has ever attended the largest meeting of Jackson County for years.—Jackson County Medical Society *Bulletin*.

On January 12, 13 and 14 the following applicants were licensed to practice in Missouri and were examined by the state board of health at St. Louis, all successfully passing the required grade: Theo. Hy. Aschmann, Inman, Kan.; Steven Vincent Cotter, St. Louis; Claude W. Drace, Piggott, Ark.; George John Epp, St. Louis; Frank Roman Finnigan, Beloit, Kan.; Lee Pettit Gay, Ironton; Glenn Delap Johnson, St. Louis; Edward Huntington Lane, East St. Louis, Ill.; Aloys Mahowald, St. Louis; Robert Mueller, St. Louis; Charles Darrell O'Keefe, Hannibal; Henry Rosenfeld, St. Louis; Richard Lee Russell, Jefferson City; Groves Blake Smith, Godfrey, Ill.; William Fred Wagner, St. Louis; John Edward Welsh, Dahinda, Ill.; Homer Franklin White, St. Louis; Park Jerauld White, Jr., St. Louis. At the same meeting the board licensed the following applicants by reciprocity: Hubert Farleigh Dunn, St. Joseph, Mo.; Jesse A. DeFreitas, Springfield, Ill.; N. McG. Fuller, Desloge; John Hogan, Chicago, Ill.; Don Cabot McCowan, Chicago, Ill.; LaVerne B. Spake, Kansas City, Kan.; James Evans Stowers, Kansas City, Mo.; Thackery Louis Berry, Columbus, Ky.; Leslie Dorse Darner, Granite City, Ill.; Ralph Hogshhead, McKendree, W. Va.; Hollie Linder, Murray, Ky.; Arthur Lawrence Nielson, Omaha, Neb.

## MEMBERSHIP CHANGES, MARCH

### NEW MEMBERS

Crabtree, Robert E., 15 Main St., Butler.  
Curran, Edward J., 401 Waldheim Bldg., Kansas City.



**OBITUARY**

Dargatz, Fred E., Belton.  
 Diveley, Rexford L., 406 Waldheim Bldg.,  
 Kansas City.

Elliott, James R., 405 Waldheim Bldg., Kan-  
 sas City.

Hallberg, John W., 721 Lathrop Bldg., Kan-  
 sas City.

James, Edward D., Joplin.

James, Percy B., 419 Shukert Bldg., Kansas  
 City.

January, Carl C., Belleview.

Leslie, James F., Bernice, Okla.

McKenna, Henry J., Waldheim Bldg., Kansas  
 City.

Myers, John L., 626 Lathrop Bldg., Kansas  
 City.

Pond, Eugene A., 1607 Genesee St., Kansas  
 City.

Stephan, Jesse J., 307 Argyle Bldg., Kansas  
 City.

Swope, Opie W., 929 Rialto Bldg., Kansas  
 City.

Thym, Herman H., 522 Altman Bldg., Kansas  
 City.

Williams, R. S., Mexico.

Wright, Ervin, Rolla.

**CHANGES OF ADDRESS**

Barson, John W., Orongo to Joplin.

Chaffin, Elizabeth B., Philadelphia, Pa., to  
 Girls' Training School, Gainesville, Texas.

Cooper, Calvin L., 713 Lathrop Bldg., Kan-  
 sas City, to 522 Altman Bldg.

Davis, Harry B., Barnhart, to 611 Lathrop  
 Bldg., Kansas City.

Hangen, William M., 1050 Century Bldg.,  
 St. Louis, to 901 Arcade Bldg.

Pulliam, Madison J., 3933 S. Broadway, St.  
 Louis, to 2800 Chippewa St.

Shelton, William J., DeKalb, to Severance,  
 Kan.

Stevenson, George R., 3303 Mitchell St., St.  
 Joseph, to Corby-Forsee Bldg.

**TRANSFERRED**

Dorsheimer, George V., Dewey, Okla., from  
 Jackson County Medical Society to Washington  
 County (Okla.) Medical Society.

**RESIGNED**

Poole, A. R., Milan.

**DECEASED**

Allen, Austin B., Maryville.

Champion, James R., Hilldale.

Koetter, Albert F., St. Louis.

Reyling, Frederick T., Kansas City.

Zuppann, Charles, Ballwin.

**JAMES R. CHAMPION, M.D.**

Dr. J. R. Champion of Hilldale, a member  
 and president of Howard County Medical So-  
 ciety, died at his home, March 8, from pneu-  
 monia, aged 58 years. He attended Missouri  
 Medical College and was licensed by the state  
 board of health in 1903, since which time he  
 has been practicing in Howard and surround-  
 ing counties.

**CHARLES ZUPPANN, M.D.**

Dr. Charles Zuppann of Ballwin, an honor  
 graduate of Rush Medical College, 1877, and  
 also a graduate in pharmacy, died at his home,  
 February 15, from heart disease following an  
 attack of influenza, aged 68 years. He practiced  
 in Iowa and Illinois for several years before  
 returning to Missouri, which was his home state,  
 and then located in St. Louis County where he  
 was actively engaged in professional work until  
 his death. He was a member of the St. Louis  
 County Medical Society and the Missouri State  
 Medical Association.

**LOGAN M. THOMPSON, M.D.**

Dr. L. M. Thompson of Nickellton, a gradu-  
 ate of the College of Physicians and Surgeons  
 of Keokuk, Iowa, 1880, died at Macon, Mo.,  
 January 19, aged 61 years. He was licensed  
 in Missouri in 1883, and besides practicing at  
 several towns in Macon County he served for  
 two years in State Hospital No. 3, and as assis-  
 tant physician at the Colony for the Feeble-  
 minded and Epileptic for two years. He was  
 a member of Macon County Medical Society,  
 the State Association, and a Fellow of the  
 American Medical Association.

**FREDERICK T. REYLING, M.D.**

Dr. Frederick T. Reyling was born in  
 Havana, Cuba, December 29, 1860. He came to  
 New York City when a boy and was educated  
 at the University of New York. He became a  
 loyal American citizen as soon as he was of age.

He received his M.D. degree at the University  
 of New York in 1884, and was Assistant Pro-  
 fessor of Pathology at the above named univer-  
 sity for several years, also Visiting Surgeon to  
 the Manhattan Eye, Ear Nose and Throat Hos-  
 pital prior to coming to Kansas City.

He came to Kansas City in 1897. For a num-  
 ber of years he taught pathology in some of  
 the local medical schools, also assisted in con-  
 ducting eye clinics.

Dr. Reyling was elected to membership in  
 Jackson County Medical Society in 1901, and

was a member of the Kansas City Eye, Ear, Nose and Throat Club, the Missouri State Medical Association, the American Medical Association and the American Academy of Ophthalmology and Oto-Laryngology.

Dr. Reyling had a good medical library, and with the study of his specialty kept abreast of the times in general medicine and pathology. He assisted at the different eye clinics in Kansas City for years, and was always very kind and gentle with poor people and ready to advise them freely.

His widow, Mrs. Bertha Reyling, a daughter, Miss Catherine, a son, Frederick, Jr., another son and two daughters, married and living in New York, survive him.

When his country became involved in war, he, being over 55, volunteered and served on the advisory and examining board. Dr. Reyling was loyal to his friends, his country, family and profession.

He died of pneumonia, Feb. 24, 1920, being ill about one week. The funeral services were conducted by Temple Lodge of A. F. & A. M.

Sympathy is extended to the family by this society.—*Necrology Committee, Jackson County Medical Society.*

#### ALBERT F. KOETTER, M.D.

There are men in the medical profession who dazzle us by their achievements and there are men in the medical profession who never dazzle us, but who on account of their sterling qualities hold us fast in grateful remembrance of their probity, their undeviating line of thought toward truth, their unswerving adherence to what is right and just and clean. Dr. Albert F. Koetter, who died on February 28, belonged to the men who do not dazzle. His whole career was an expression of faithful work and of a keen desire to proceed, without noise and without ostentation, toward the goal which his ambition urged him unremittingly to reach. That he reached his goal cannot be gainsaid by anyone and that the goal was an enviable one is equally not open to contradiction. As president of the St. Louis Medical Society in 1914, and as its secretary-editor in 1918-1919, and also as a delegate to the American Medical Association in 1919, he illustrated his excellent qualities as an organizer and the sort of officer who never allows the petty prejudices of others to swerve his thought from the high standard of rectitude. These qualities, born of his determination to hold fast to the highest ideals in his practice of medicine and in his capacity as officer, were not lacking in his various attitudes toward the vicissitudes of life. This was made evident to all his friends during the last four years of his life. With full knowledge of the disease that was burdening him and its incurability, he never allowed the thought of the doom that was hanging over

him to interfere with his strict attention to his practice or to those avocations which make up the sum and substance of life. That he must have had his "dark" hours despite his determination never to yield to feelings of depression, goes without saying, but his Spartan-like courage never lost ground; and not until a few weeks before his death was it apparent to his friends that even his courage was hopeless in the face of the disease that was sapping his strength. Of such stuff was Albert F. Koetter, and of such stuff are few men made.—*Bulletin, St. Louis Medical Society.*

## CORRESPONDENCE

### MEDICAL VETERANS

WASHINGTON, D. C., Feb. 25, 1920.

*To the Editor:* An association of Medical Veterans of the World War was organized at Atlantic City, in June, 1919, at the time of the meeting of the American Medical Association, and a constitution and by-laws adopted. About 2,800 physicians have already joined and all others who are eligible are invited to join the society.

The organization of the society provides for state and local organizations wherever the members desire it, and in some states, such as Wisconsin, organization has already been effected.

It is desired by the National Association that those who are already members meet together in larger and smaller groups, at the first convenient opportunity, and effect a local organization with a chairman and secretary.

The national organization will assist by furnishing application blanks and copies of the constitution and by-laws, and, if desired, stationery.

The first thing to be done after the organization of a state society is effected is to elect a councillor to the general council of the organization, to represent the state society at the next annual meeting of the Veterans at New Orleans on the first day of the meeting of the American Medical Association, April 26, 1920.

A badge or button for members of the society is being made and will soon be ready for distribution.

F. F. RUSSELL, Secretary.

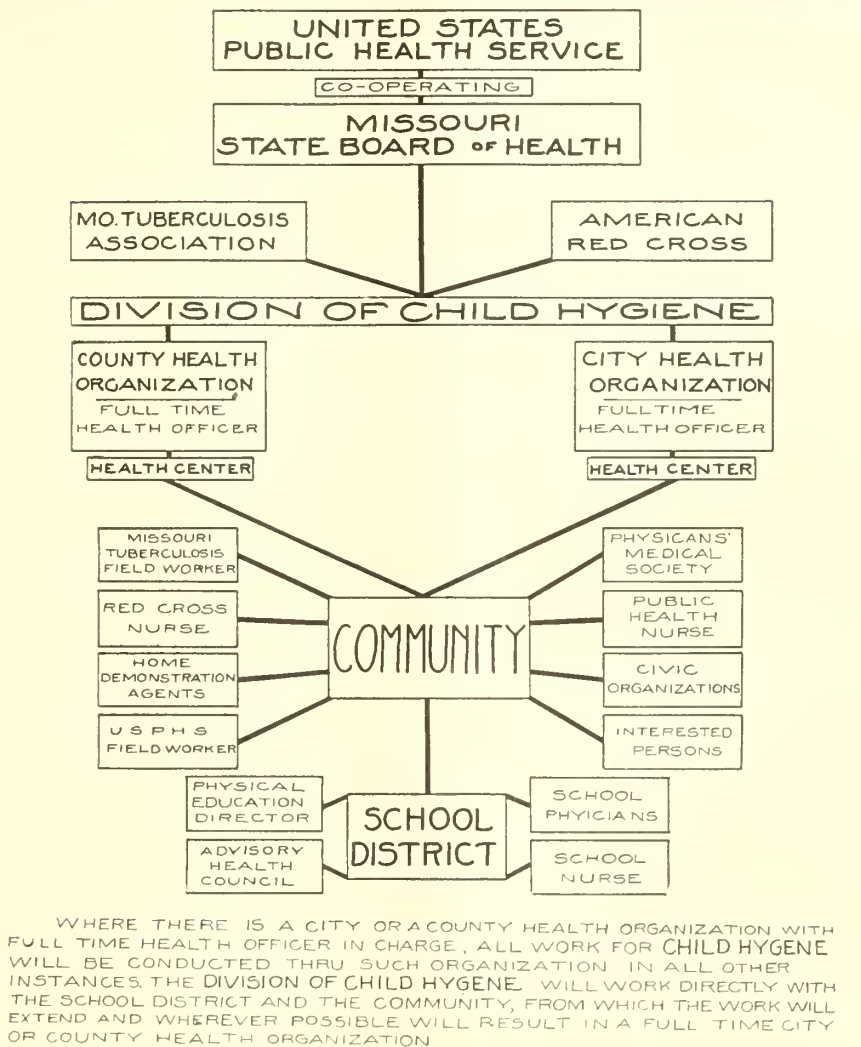
## MISCELLANY

### HONORABLY DISCHARGED, MEDICAL CORPS, U. S. ARMY AND NAVY

Butzke, E. J., Bowling Green.  
Farrell, J. A., St. Louis.  
Hollingsworth, W. Y., Bell Air.  
Kuhlmann, F. C. E., St. Louis.  
Lynn, W. J., Kansas City.  
Ridge, F. I., Kansas City (Navy).



ORGANIZATION PLAN FIELD INVESTIGATIONS IN CHILD WELFARE



DIVISION OF CHILD HYGIENE  
MISSOURI STATE BOARD OF HEALTH  
JEFFERSON CITY - MISSOURI

CHILD HYGIENE SURVEY

The various activities cooperating with the state board of health and the U. S. Public Health Service in the present survey of hygienic conditions surrounding the children of the state are shown in the accompanying chart. As outlined in our editorial pages, this undertaking is the initial experiment of public health organizations out of which it is hoped shall grow intelligent methods of instructing the people, particularly parents and teachers, in the upbringing of healthy children. On the results of this survey will be based plans for the extension of this work through the U. S. Public Health Service in other states.

FREE DISPENSARY SERVICE RESUMED

The rector and vestry of the Parish of the Holy Communion Church at St. Louis have decided to resume the free medical dispensary and clinical service at 2809 Washington Avenue, which was suspended at the outbreak of the recent world war. The personnel

of the medical staff and clinic service as far as these have been completed at present, are given below:

CLINICAL STAFF	
DR. GEORGE HOMAN, DIRECTOR OF HYGIENE	
Medicine.....	Dr. Solon Cameron, Chief
	Dr. Arthur Gundlach, Assistant
Surgery .....	Dr. T. A. Hopkins, Chief
	Dr. A. J. Murphy, Assistant
Diseases of Eye .....	Dr. L. H. Crapp, Chief
	Dr. W. C. Owen, Assistant
Diseases of Ear, Nose, Throat.....	Dr. W. D. Black, Chief
Diseases of Children.....	Dr. Francis L. Bishop, Chief

SCHEDULE OF SERVICE					
Clinics	Mon.	Tues.	Wed.	Thurs.	Fri
Medicine ..	3:30 to 4:30 p. m.		3:30 to 4:30 p. m.		3:30 to 4:30 p. m.
Surgery ...	2 to 3 p. m.		2 to 3 p. m.		2 to 3 p. m.
Eye .....		1:30 to 2:30 p. m.		1:30 to 2:30 p. m.	
Children ..	11 to 12 a. m.				11 to 12 a. m.

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1920

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH  
HAVE PAID THE STATE ASSESSMENT FOR  
ALL THEIR MEMBERS)

Webster County Medical Society, Dec. 1, 1919.  
Madison County Medical Society, Dec. 2, 1919.  
Livingston County Medical Society, Dec. 31, 1919.  
Schuyler County Medical Society, Jan. 9, 1920.  
Benton County Medical Society, Jan. 23, 1920.  
Camden County Medical Society, Jan. 28, 1920.

## Missouri State Medical Association

Sixty-Third Annual Meeting, Jefferson City,  
April 6, 7, 8, 1920

### PROGRAM

#### HOUSE OF DELEGATES

FIRST DAY—TUESDAY, APRIL 6, 1920—9:30 A. M.

##### SENATE CHAMBER

Roll Call.  
Reading of Minutes of Previous Meeting.  
Reading of President's Message and Recommendations.  
Report of Committee on Arrangements.  
Report of Secretary.  
Report of Treasurer.  
Report of Committee on Scientific Work.  
Report of Committee on Health and Public Instruction.  
Report of Defense Committee.  
Report of Committee on Medical Education.  
Report of Committee on Cancer.  
Report of Committee on Vaccination.  
Appointment of Committee on Nominations.  
Report of Special Committees:  
Committee on Constitution and By-Laws.  
Committee on Blindness.  
Committee on Expert Testimony.  
Committee on Necrology.

RECESS TILL 3 P. M.

Report of the Council.  
Report of Reference Committees.  
Reading of Resolutions, Memorials, etc.  
Selection of Place of Next Meeting.  
Miscellaneous Business.

SECOND DAY—WEDNESDAY, APRIL 7—2 P. M.

##### SENATE CHAMBER

Reading of Minutes of Previous Meeting.  
Report of Nominating Committee.  
Unfinished Business.

### THE COUNCIL

TUESDAY, APRIL 6—I P. M.

##### SENATE LOUNGING ROOM

1st District.....E. L. Crowson, Pickering  
2d District.....O. C. Gebhart, St. Joseph  
3d District.....G. W. Whiteley, Albany  
4th District.....J. B. Wright, Trenton  
5th District.....J. R. Bridges, Kahoka  
6th District.....P. F. Cole, Ewing

7th District.....J. D. Smith, Shelbina  
8th District.....L. W. Cape, Maplewood  
9th District.....A. R. McComas, Sturgeon  
10th District.....D. A. Barnhart, Huntsville  
11th District.....G. W. Hawkins, Salisbury  
12th District.....Spence Redman, Platte City  
13th District.....Franklin E. Murphy, Kansas City  
14th District.....C. T. Ryland, Lexington  
15th District.....L. J. Schofield, Warrensburg  
16th District.....E. N. Chastain, Butler  
17th District.....W. J. Ferguson, Sedalia  
18th District.....J. P. Burke, California  
19th District.....S. V. Bedford, Jefferson City  
20th District.....A. H. Hamel, St. Louis  
21st District.....G. M. Rutledge, Ste. Genevieve  
22d District.....H. L. Reid, Charleston  
23d District.....J. H. Timberman, Marston  
24th District.....Frank Hyde, Eminence  
25th District.....O. A. Smith, Farmington  
26th District.....W. H. Breuer, St. James  
27th District.....J. C. B. Davis, Willow Springs  
28th District.....A. L. Anderson, Springfield  
29th District.....R. L. Wills, Neosho

### GENERAL MEETING

TUESDAY, APRIL 6, 1920—9 A. M.

##### HOUSE OF REPRESENTATIVES

Diagnosis of Peripheral Nerve Injuries  
G. Wilse Robinson, M.D., Kansas City  
Peripheral Nerve Injuries  
R. D. Ireland, M.D., Kansas City  
Discussion opened by Dr. Francis Reder and Dr. J. F. McFadden, St. Louis  
Cardiomyosis for Chronic Adhesive Pericarditis. Presentation of Case. Elsworth Smith, M.D., St. Louis  
Discussion opened by Dr. Howard Hill, Kansas City  
Full Term Extra-Uterine Pregnancy  
Q. U. Newell, M.D., St. Louis  
Discussion opened by Dr. H. S. Crossen, St. Louis  
Artificial Anus.....W. T. Coughlin, M.D., St. Louis  
Discussion opened by Dr. S. B. Hibbard, Kansas City  
Transplantation of Bone  
Ernest F. Robinson, M.D., Kansas City  
Traumatic Aneurysm  
H. S. Valentine, M.D., Kansas City  
Discussion opened by Dr. W. C. G. Kirchner, St. Louis  
Abdominal Lues...J. Q. Chambers, M.D., Kansas City  
Discussion opened by Dr. C. C. Dennie, Kansas City

### GENERAL MEETING

TUESDAY, APRIL 6, 1920—1:30 P. M.

##### HOUSE OF REPRESENTATIVES

Five Years' Experience with Stock Vaccines  
J. J. Gaines, M.D., Excelsior Springs  
Discussion opened by Dr. J. D. Seba, Bland  
Dacryocystitis, Treated by Curettage and Rapid Dilatation.....John Green, Jr., M.D., St. Louis  
Discussion opened by Dr. J. S. Lichtenberg, Kansas City  
Subconjunctival Injections of Cyanide of Mercury in the Treatment of Corneal Infections  
W. H. Schutz, M.D., Kansas City  
Discussion opened by Dr. F. E. Woodruff, St. Louis  
The Eye, the Window of the System  
William F. Hardy, M.D., St. Louis  
Discussion opened by Dr. R. J. Curdy, Kansas City  
Observations on Chronically Enlarged Tonsils  
J. Addison Lea, M.D., Kansas City  
Streptococcic Mastoiditis  
V. W. McCarty, M.D., Kansas City  
The Line Between Medical and Surgical Procedure  
A. B. Miller, M.D., Macon



The Present Status of Nitrous Oxid Anesthesia  
M. H. Clark, M.D., Kansas City  
Surgery of Gonorrhea in the Male  
E. G. Mark, M.D., Kansas City  
Discussion opened by Dr. C. E. Burford, St. Louis

### GENERAL MEETING

WEDNESDAY, APRIL 7, 1920—9 A. M.

HOUSE OF REPRESENTATIVES

Address of Welcome

Gov. Frederick D. Gardner, Jefferson City  
President's Address...N. P. Wood, M.D., Independence

#### SYMPOSIUM ON CANCER

Operative Treatment of Cancer of the Tongue

Vilray P. Blair, M.D., St. Louis  
Use of Radium in Cancer of the Face, Jaws and Oral  
Cavity.....Ellis Fischel, M.D., St. Louis

The Actual Cautery in the Treatment of Superficial  
Cancer.....C. F. Sherwin, M.D., St. Louis  
Modern Treatment of Malignancies

L. A. Marty, M.D., Kansas City  
Inoperable Cancer....W. E. Leighton, M.D., St. Louis  
Deep Therapy with X-Ray

E. C. Ernst, M.D., St. Louis  
Discussion by Dr. W. J. Frick, Dr. Jabez N. Jackson,  
Kansas City, and Dr. M. G. Seelig, St. Louis.

### GENERAL MEETING

WEDNESDAY, APRIL 7, 1920—1:30 P. M.

HOUSE OF REPRESENTATIVES

Summer Diarrhea in Infants

John Zahorsky, M.D., St. Louis  
Discussion opened by Dr. E. H. Schorer, Kansas  
City

Feeding of Athreptic Infants

M. J. Lonsway M.D., St. Louis  
Discussion opened by Dr. T. C. Hempelmann, St.  
Louis

Physical Examination of the Infant

F. C. Neff, M.D., Kansas City  
Discussion opened by Dr. Ellsworth Moody, Joplin  
Malignant Growths in Children

M. B. Clopton, M.D., St. Louis  
Discussion opened by Dr. J. F. Binnie, Kansas City  
Recent Observations on Perth's Disease

C. B. Francisco, M.D., Kansas City  
Treatment of Spinal Tuberculosis in Children

C. A. Stone, M.D., St. Louis  
Bone Tuberculosis: Surgical and Sociological Aspects  
William W. Hoyt, M.D., St. Louis

Tuberculosis of the Hip  
J. Edgar Stewart, M.D., St. Louis

Discussion opened by Dr. J. D. Griffith and Dr.  
R. M. Schauffler, Kansas City

### GENERAL MEETING

THURSDAY, APRIL 8, 1920—9 A. M.

HOUSE OF REPRESENTATIVES

Practical Therapeutics in Dermatology

W. D. Hammond, M.D., St. Louis  
Relation of the Proctologist to Group Medicine

W. H. Stauffer, M.D., St. Louis  
Discussion opened by Dr. Daniel Morton, St. Joseph

The Interpretation of Bacteriological Evidence in In-  
fluenza and Infections of Unknown Origin

R. A. Kinsella, M.D., St. Louis  
Discussion opened by Dr. M. P. Ravenel, Columbia

Influenzal Pneumonia...L. S. Milne, M.D., Kansas City  
Discussion opened by Dr. J. C. Lyter, St. Louis

Social Medicine.....S. P. Child, M.D., Kansas City  
Discussion opened by Dr. A. H. Hamel, St. Louis

The State Laboratory in Diagnosis

M. P. Ravenel, M.D., Columbia  
Discussion opened by Dr. W. A. Clark, Jefferson  
City

A Plea for a State General Hospital Affiliated with  
County Hospitals; and for Completed Medical Edu-  
cation in Missouri University

Frank G. Nifong, M.D., Columbia  
Discussion opened by Dr. H. L. Reid, Charleston

Missouri's Fight Against Venereal Diseases

R. L. Russell, M.D., Jefferson City

### TWELFTH ANNUAL MEETING OF MIS- SOURI SOCIETY OF MEDICAL SECRETARIES

JEFFERSON CITY, APRIL 7—4 P. M.

SENATE LOUNGING ROOM

#### OFFICERS

President.....J. T. Hornback, Nevada  
First Vice President.....R. W. Rea, Plattsburg  
Second Vice President.....T. J. Rigdon, Kennett  
Secretary.....E. E. Brunner, Carrollton

#### PROGRAM

Roll Call

Reading Minutes of Previous Meeting

Election of Officers

Our County Society Honor Roll...Dr. H. S. Crawford

Our District Postgraduate Meeting....Dr. J. J. Gaines

A Model County Society Meeting.....Dr. O. B. Hall

Unfinished Business

New Business

For the Good of the Society of Secretaries

Dr. E. J. Goodwin

### SECRETARIES' BANQUET, MADISON HOTEL

WEDNESDAY, APRIL 7, 1920—6 P. M.

Address.....N. P. Wood, M.D.

Nitro-by-Hypo.....Dr. J. J. Gaines

Short Talks by Past Presidents

Drs. T. O. Klingner, F. H. Matthews, J. H. Timber-  
man, Spence Redman

### ST. LOUIS MEDICAL SOCIETY

Meeting of January 20, 1920

The meeting was called to order at 8:40 p. m. by the  
president, Dr. Cyrus E. Burford.

Mr. George M. Bonham of St. Joseph, Mo., read a  
paper on "The Physicians and Surgeons Exchange and  
Its Value to the Profession."

On motion the matter of placing an exchange in St.  
Louis was referred to the Council for action.

The scientific program consisted of the following:  
"Rhinophyma," by Dr. Major G. Seelig.

Discussion by Drs. Francis Reder and Robert E.  
Schlueter; Dr. Seelig closing.

"The Radium Treatment of Cancer of the Esophagus  
Under X-Ray Control," by Drs. R. Walter Mills and  
John S. Kimbrough.

Discussion by Drs. John S. Kimbrough, William T.  
Coughlin, Ellis Fischel, Samuel E. Peden, H. W. Soper  
and E. Lee Meyers; Dr. Mills closing.

Attendance 78.

ARTHUR GUNDLACH, M.D., Secretary.

Meeting of January 27, 1920

The meeting was called to order at 8:40 p. m. by the  
president, Dr. Cyrus E. Burford.

Dr. Francis Reder introduced Dr. Louis Frank of  
Louisville, Ky., who read a paper entitled, "Blood  
Studies in Connection with Surgery."

Discussion by Drs. Henry J. Scherck, Rutherford B. H. Gradwohl, Elsworth S. Smith, William Engelbach; Dr. Frank closing.

Dr. Stauffer introduced Dr. Granville S. Hanes, also of Louisville, Ky., who read a paper entitled, "Local Pain and Other Symptoms Associated with Infection of the Anal Tissues."

Discussion by Drs. Stauffer, Oscar Elbrecht and William Engelbach; Dr. Hanes closing.

Dr. Engelbach moved that the by-laws be suspended and that Drs. Frank and Hanes be elected to honorary membership. Seconded and carried.

Attendance 71.

#### Meeting of February 3, 1920

Dr. Oswald P. J. Falk read a paper entitled, "Impressions Obtained on Some of the Present Day Medical Problems by Interviews with Leading American Investigators."

Dr. John Zahorsky read a paper entitled, "Recent Experiences with Diphtheria."

Discussion by Drs. William Engelbach, John C. Falk, Edward P. Buddy, George Ives and George Stone; Dr. Zahorsky closing.

The discussion of Dr. Falk's paper was then opened by Dr. William Engelbach; Dr. Falk closing.

Dr. Samuel T. Lipsitz opened a general discussion on influenza and the present pandemic of this disease.

The discussion was continued by Drs. George Ives, Rolla Henry, Cyrus E. Burford and William Engelbach.

It was moved that it be the sense of the society that all nurses and nurses' organizations be informed, through all available channels, of the very urgent need of more trained nurses in combating the present pandemic of influenza and pneumonia, urging that private nurses be relinquished for this work wherever possible and that the matter be referred to the Committee on Health and Public Instruction. Seconded and carried.

The following resolutions were presented by the Health and Public Instruction Committee:

In view of the fact that we are at present experiencing a renewed spread of influenza in our community, and in view of the experience gained in the epidemic of 1918-1919, be it

*Resolved*, That the St. Louis Medical Society indorse the proclamation of Mayor Kiel (January 26) placing in the hands of the Health Commissioner of St. Louis the power "to take such steps and use such measures as may be necessary to avoid, suppress and mitigate said disease and to do all things necessary to safeguard the lives and health of the inhabitants of the city of St. Louis against the ravages of this disease," and be it further

*Resolved*, That we pledge the hearty support of the St. Louis Medical Society to the Health Commissioner of St. Louis in combating the spread of this dread disease.

On motion the resolutions were adopted.

Attendance 45.

HILLEL UNTERBERG, M.D., Secretary, pro tem.

#### Meeting of February 10, 1920

The meeting was called to order at 8:40 p. m. by the president, Dr. Cyrus E. Burford.

The minutes of the previous meeting were read and approved.

The scientific program consisted of a discussion of influenza as follows:

"X-Ray Plates of Influenzal Pneumonia," by Dr. Le Roy Sante.

"Encephalitis Lethargica," by Dr. Frank R. Fry.

"Symptoms," by Dr. Llewellyn Sale.

"Treatment," by Dr. Samuel T. Lipsitz.

"The Organism," by Dr. Ralph A. Kinsella.

"Postpneumonic Empyema," by Dr. J. Curtis Lyter.

General discussion by Drs. Albert H. Hamel, Charles H. Neilson, Samuel E. Peden, Jonas C. Kopelowitz, Frederick W. Abeken, E. Lee Myers, David S. Booth, Louis C. Boisligniere and Cyrus E. Burford.

Attendance 96.

ARTHUR GUNDLACH, M.D., Secretary.

#### PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

Sixty-Fourth Meeting, Monday, Jan. 12, 1920

#### 1. EXHIBITION OF CASES.—A. A CASE OF POST-DIPHTHERITIC PARALYSIS INVOLVING THE MUSCLES OF RESPIRATION.—By DR. W. McK. MARRIOTT.

Girl 10 years of age suffered severe attack of diphtheria six weeks before admission to hospital. Was given antitoxin late in disease. Two weeks after attack of diphtheria developed, palatal paralysis and an internal strabismus and paralysis of accommodation. The muscles of the lower extremities, of the back and of the neck became progressively involved. On admission to the hospital there was practically complete paralysis of the soft palate, of the lower extremities, a weakness of the abdominal muscles, complete paralysis of the diaphragm and apparent weakness of the intercostal muscles. The patient suffered great difficulty with respiration and this difficulty increased with further progressive weakening of the intercostal muscles. Deep cyanosis developed and it became evident that unless some means were adopted to bring about respirations that death would occur within a very short period of time. The patient was given artificial respiration by means of the Erlanger air current interrupter connected to a gas anesthesia mask. After a few attempts the patient cooperated well and did not object to the mask. By this means good expansion of the lungs was obtained and the cyanosis rapidly disappeared. After a period of artificial respiration the child usually fell asleep and awakened only when dyspnea and cyanosis again became extreme. The artificial respiration was kept up intermittently for six days by which time there had been a restoration of function of the intercostal muscles and a slight functional activity of the diaphragm. Diaphragmatic function gradually returned and the child is at present in excellent condition.

#### B. A CASE OF GLIOMA OF THE RIGHT LOBE OF THE CEREBELLUM.—By DR. ERNEST SACHS.

I am presenting this patient who had a glioma of the right lobe of the cerebellum removed five years ago because he emphasizes two points about gliomas about which there is usually a good deal of misunderstanding. In the first place, gliomas are not true malignant tumors since they never metastasize and in the second place that though a tumor is infiltrating in character which a glioma usually is, it may be radically removed, as in this case. Another point of great interest in this case is that in spite of the extensiveness of the process, the solid and cystic portion of the tumor together having been about the size of a small apple, its removal has left the patient without any symptoms. He is in every way normal, with the one exception that his Bárány tests show the absence of past-pointing in his right hand. This case emphasizes what can be done if cases come to operation early enough.

#### C. CASE OF HYPOTHYROID FUNCTION SHOWING MYXEDEMA.—By DR. JOHN E. ELMENDORF, JR.

History: Mrs. L. B. was first seen at Washington University Dispensary in 1913; at this time showed hypothyroid condition with manifestation of a kidney involvement and an elevated blood pressure—190/130.



Up to the present has been admitted to the hospital four times, each time coming with complaint of shortness of breath, weakness, some dizziness and headache.

The physical condition has been practically the same on each admission—and under rest and thyroid extract there has been a marked improvement in symptoms.

On the present admission in addition to the former complaints of weakness, dizziness, headache and shortness of breath she has been subject to fainting spells and complains of failing memory.

On examination, the special features characteristic of her condition are manifest: 1. Slow in answering questions and dull mentally. 2. Short and broad in stature, face has a stupid expression, lips thick. 3. Hands and feet are short, broad and stubby. 4. Hair is scanty, slight temporal alopecia, no axillary hair, very little pubic hair. 5. Skin is dry over whole of body, and over backs of hands is scaly; subcutaneous tissue firm. Thyroid not felt. 7. Heart is enlarged; blood pressure elevated, 210/120. Urine showed persistent albumin, a variable specific gravity, no casts. 8. Laboratory test: Blood sugar curve shows an increase of sugar in blood after three hours. An unexpected finding is a positive adrenalin test. (Test done before administration of thyroid therapeutically.) Electrocardiogram shows left ventricular preponderance. Phthalein test shows 35 per cent. in two hours on admission which later increased to 60 per cent.

SUMMARY.—We have a case of long standing which shows the typical hypothyroid condition associated with a slight grade of nephritis.

## 2. PREDISPOSING FACTORS IN CANCER OF THE VULVA.—By DR. FRED. J. TAUSSIG.

The peculiar leukoplakic vulvitis occasionally found in old women presents one of the most interesting pre-cancerous lesions to be found anywhere in the body. The basis of the present study are twenty cases of leukoplakia, twenty-three cases of cancer of the vulva, and several cases of the peculiar obliterated condition known as kraurosis.

For comparative clinical study exact notation was made as to the form of involution occurring after the menopause in the vulva of one hundred women averaging 67 years of age. The conclusions from this study were that extreme atrophy with obliteration of labial folds occurred in a considerable number (thirteen out of one hundred); that this obliteration could in part be explained by multiparity; that pruritus was a rare symptom even in presence of considerable vaginal discharge; that occasionally the vulvar skin is so brittle as to break on slight stretching.

The so-called kraurosis vulvae, in which there is complete obliteration of the folds and a narrowing of the vaginal orifice, can be explained as the result of repeated small traumatisms with low grade infection occurring in women, presenting the extreme type of atrophy described above. Dyspareunia is the most marked symptom of this disease; pruritus is usually absent.

Leukoplakic vulvitis is associated in 95 per cent. of the cases with cessation of ovarian function. It is usually a very chronic process, with marked pruritus extending over years. The immediate cause would seem to be the absence of elastic tissue in the upper layers of the dermis, which by rendering the epidermis more susceptible to external traumatism, leads to numerous small cracks and resulting infection by skin bacteria. The exudate produced by this infection causes pruritus and this in turn leads to further abrasions and infections. Gradually a white parchment-like skin develops in this area, and from such a thickened skin there developed, in fourteen out of twenty cases of this series, a carcinoma. The cases with complete obliteration of labial folds are more susceptible

to this peculiar change, hence, we have the combination of kraurosis and leukoplakia occurring frequently. In this series ten out of twenty cases were of this sort.

Carcinoma of the vulva is also a disease of old age. While due mainly to leukoplakic vulvitis (fourteen cases), it is at times found resulting from tertiary syphilitic ulcers (two cases), external traumatism (two cases), condyloma acuminata (one case). The disease varies greatly in malignancy, at times causing death in six or seven months, whereas other cases remain almost stationary for a year or two. Those developing on a kraurotic base develop more slowly and are curable in a higher percentage. The tributary lymph glands are involved in almost all instances.

Complete histologic studies were made in twenty-five of the above cases, and compared with pieces of normal and senile vulvar skin. The changes in leukoplakic vulvitis are particularly pronounced, in the dermis there is the absence of elastic tissue, marked lymphocytic infiltration, presence of numerous mast cells, and hyalinization of connective tissue. In the epidermis there is, in the earlier stages, marked acanthosis, increase of the eleidin layer and hyperkeratosis; in the later stages the epidermis becomes more atrophic and the papillary body obliterated, leaving the basement membrane in a somewhat frayed-out condition. The treatment of both leukoplakic vulvitis and carcinoma of the vulva is surgical. Radium and roentgen ray give very unsatisfactory results and produce in almost all cases intense painful irritation. In malignant cases tributary lymph glands should be removed in the complete manner suggested by Basset.

## DISCUSSION

DR. ENGMAN: I have had the pleasure of examining Dr. Taussig's sections and have found them extremely interesting and profitable. It seems to me he has here a distinct pathologic entity in that basically there is an early degeneration in the part spoken of, "of the elastic tissue." We know that the early senile change in the skin may be seen in the stained tissue. The chemical affinities of elastic tissue for stains degenerate with age. This condition would naturally begin in those parts where there is a great deal of elastic tissue, as about the genitalia. We know from the study of other pathologic conditions that when there are changes in the elastic tissue there are also changes in the epidermis. These latter changes are probably due to the loss of the tensile effect of the elastic tissue over the capillaries which then with the least trauma allows the outpouring of serum into the tissue. This serum flows in the path of least resistance toward the epidermis, causing edema of it, which in turn produces pruritus. The pruritus thus produced causes the patient to scratch and traumatize the part, which adds to the condition. Thus chronic irritation goes on with the production of thickening and later degeneration, described by Dr. Taussig. I believe that the fundamental pathologic factor here is the early local changes and degeneration of elastic tissue with its subsequent disappearance from the upper part of the derma.

## 3. NEW METHODS FOR THE STUDY OF BLOOD PRESSURE.—By DR. ALFRED C. KOLLS.

The first method to be described is one for obtaining continuous systolic tracings in man. The method depends on the well known fact that a second cuff, where placed below the cuff used in obliterating the artery is connected to a sphygmograph; it is a good criterion for the determination of systolic pressure. A special type of sphygmograph similar to a piston recorder and equipped with electrical contacts is used in place of a tambour. By automatically forcing air into the upper cuff when the sphygmograph is actuated by the escape of pulsations beneath the upper

cuff and allowing air to flow out when the sphygmograph is at rest, graphic records of the pressure have been obtained. Observations are made by placing the two cuffs on the subject's arm and connecting them so that the lower one may be inflated from the other in order to insure good transmission of the pulsations to the sphygmograph. The communication between the two cuffs is closed when sufficient pressure has been made in the sphygmograph system. The upper cuff is connected with a recording mercury manometer and an electromagnetic device of such design that a valve is opened to a head of pressure (a large bottle which is pumped up at intervals with a bulb) when the circuit is completed and closed when the circuit is broken. Synchronous with the closing off of the head of pressure another valve establishes a communication between the upper cuff and the outside air so that the pressure slowly falls. Thus, when the intra-arterial pressure is higher than the pressure in the upper cuff, pulsations reach the second cuff and actuate the sphygmograph, which breaks a relay circuit and this in turn closes the circuit to the electromagnet, opening the valve between the head of pressure and the cuff. In case the intra-arterial pressure is lower than the pressure in the upper cuff, the sphygmograph is at rest and air slowly escapes from the valve just mentioned. These changes of pressure are recorded on a moving drum by the mercury manometer. The tracings cannot be regarded as true systolic pressure at all points, particularly is this true of the highest part of the respiratory wave. The method does, however, give a good idea of the types of pressure variations.

The other method is one which has been found satisfactory for the indirect determination of systolic and diastolic pressure in the unanesthetized, unoperated dog. The cuff consists of a solid piece of aluminum which is placed over the outer aspect of the shaved leg. The bag is placed over the inner aspect and enclosed in a piece of heavy, inelastic fabric (moleskin). The criteria for the pressures are those of Dr. Erlanger. A special type of sphygmograph was found necessary in order to register the pulsations. When checked by the direct method with the animal under anesthesia the determinations were found to be accurate; that is, within 5 mm. of the actual pressures.

#### DISCUSSION

DR. ERLANGER: There is no question but that the mechanical devices that Dr. Kolls has developed in connection with this problem are going to be of great assistance in measuring blood pressure in man and in the dog. The chief advantage of the first method is that it permits us to follow the variations in the arterial pressure. Every indirect method is fraught with certain errors. One of the errors is the result of the resistance of the tissues to compression from without. It was shown by von Recklinghausen that a broad arm band tends to overcome this. It is possible that Dr. Kolls' arm band is somewhat too narrow to fully overcome the resistance of tissues. The arm bands used in this case can not be made as wide as may be necessary because two bands must be used. The result must be that the systolic pressure readings on this account tend to be too high.

On the other hand, I found in some observances reported on a previous occasion, that as the arm band is widened another error creeps in, arising from the resistance to the transmission of the pulse offered by the compressing of the artery; it increases with the length of artery compressed. Therefore, it is impossible, with the methods we now possess, to get the systolic pressure accurately; as the arm band is widened one error increases while the other diminishes. I imagine the record obtained by Dr. Kolls' method would indicate pressures that are too high were it not for the electrical control of the recording manometer; the lower arm band probably does not pick up the

first pulses that succeed in forcing their way under the upper arm band. I mention this not for the purpose of casting doubt on the value of Dr. Kolls' ingenious contribution, for I am convinced that his apparatus provides us with a valuable method of following variations of the systolic pressure.

I would like to ask Dr. Kolls how long the record can be followed before discomfort develops. I know from my own experience that distention of the veins in time gives rise to considerable discomfort.

DR. KOLLS, closing: When I gave this method a name it was named from the criterion of pressure employed, namely, systolic pressure. There is an error in the cuff which differs with different individuals. When determinations were made with this particular cuff and then made with another wider cuff, they checked quite closely. I do not believe that would be true for all arms and degrees of muscular development.

Dr. Erlanger asked whether there was any discomfort. Discomfort begins usually at the end of ten minutes. I have had the cuff on for over thirty minutes. I think perhaps I have become accustomed to the sensation. A peculiar thing is that, if a coarse adjustment of the sphygmograph is made, there is less discomfort than with accurate adjustment which completely obliterates the artery.

#### 4. ISOLATED NASAL REFLEXES.—By DR. GREENFIELD SLUDER.

I desire to emphasize some isolated nasal reflexes and to suggest their possible help in the understanding of the mysterious phenomena summed up as migraine. Particularly do I wish to record some observations on vertigo seemingly of nasal origin.

In an instance of a normal man 27 years old suffering from a choroiditis apparently of hyperplastic sphenoidal origin (usually) without secretion, severe vertigo occurred when the sphenoid cell closed up after operation for relief of choroiditis (eight months later). His vision had fallen off much and he was so dizzy that he had to be led by an attendant. The dizziness was a side-to-side shifting, not the rotation type. Reopening of the sphenoid cell of the left side stopped the vertigo almost at once. (An hour later it was gone.)

In another instance of a normal woman 30 years old the sphenoidal cells had been opened five years before for intractable headache. At the time now referred to (five years after operation) she had acute pharyngitis with temperature 99.5. The next morning her temperature was normal but she said it had gone up into her nose and she was so dizzy that she could not raise her head from her pillow; if she did she fell to the left, vision was confused and she vomited. Intraspinal application of one-half drop saturated solution of cocaine in water to the posterior wall and floor of the sphenoid cells stopped the vertigo and nausea in fifteen minutes, and it did not return. No other medium was administered.

These apparent nasal reflexes together with some that I have already reported, to wit: photophobia, a sense of bright light when no light was in the room, isolated pain in eye, nausea, and scotoma scintillans, seem worth recording when one recalls some of the phenomena of migraine, as well as some obscure clinical conditions where these are the only clinical manifestations.

#### DISCUSSION

DR. SACHS: What Dr. Sluder has described can justly be termed reflexes. One question of interest is, what the mechanism can be by which they occur and whether we have any anatomic facts which would explain these reflexes. We see clinically occasionally facial paralysis following a lesion of the trigeminus. Several cases have been recorded where, after removal



of the Gasserian ganglion, a facial paralysis developed. These have been explained in this way, that the sensory pathway having been destroyed, the motor nerve no longer functionates. If that is a correct observation, and I think it is, it is perfectly possible that these reflexes Dr. Sluder has described may be explained in a similar way.

Some years ago I showed that the posterior longitudinal bundle probably arises in the corpus Luysii of the optic thalamus, and passes down connecting with all the nuclei in the pons and medulla. It is perfectly possible therefore that an irritation of the fifth nerve through the mucous membrane of the nose could set up a disturbance in the vestibular portion of the eighth nerve and thus produce the vertigo that he describes.

DR. SCHWAB: These observations of Dr. Sluder's are very interesting and they deserve most serious attention. They are carefully observed facts which have been not only once but repeatedly studied. It is up to the neurologist or somebody else to give an adequate explanation. Dr. Sachs has given an anatomic explanation of the relation between the seventh and fifth nerve as far as reflex stimulation from one to the other is concerned.

There is another way of approaching this question and that is by studying the effects of cocaine on the blood vessels. Cocaine has a slight constrictor action on blood vessels, and if the vertigo is due to an increased depression in these cases it may be that the cocaine relieves it by decreasing the pressure conditions. On the other hand, I have noted in two cases vertigo produced by cocaineization; so that the problem is not as simple as here stated.

We know also that vertigo can be stopped by all kinds of manipulation. It has been stopped and permanently stopped by a spinal puncture and it has been caused by a spinal puncture. Toxic cases of vertigo are common and a tonsil or affected tooth may be the etiologic factor.

A number of years ago Oppenheim wrote a paper on vertigo in which he accentuated not only the rigidity symptoms but the fear of falling accompanying the attack of vertigo.

It is therefore seen that vertigo is caused by an extremely delicate mechanism in which there are not only anatomic but also psychological causes.

#### BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held at the Commerce Club rooms, January 21, with thirty-four members present, the president, Dr. L. J. Dandurant, in the chair. The minutes of the previous meeting were read and approved, after which the president announced his appointment of committees to serve for the ensuing year.

On motion the president was instructed to take out a membership in the Commerce Club in the name of the Buchanan County Medical Society.

The treasurer's report was read and referred to the executive committee for auditing and investigation.

The executive committee recommended that the contract now existing between the Buchanan County Medical Society and the *Medical Herald* be renewed.

On motion by Dr. Morton, seconded by Dr. Woodson, a warrant was ordered drawn on the treasurer to renew the subscription for medical journals with the city library, to the amount of \$87.45.

House Bill No. 5123, which is now before Congress, was read and unanimously endorsed by the society. This bill was intended to prevent transmission through the mail of advertising relating to the treatment of venereal diseases and certain sexual disorders.

Dr. O. C. Gebhart was nominated and duly elected to serve as secretary for the ensuing year. The secretary was instructed to publish in the next issue of the *Bulletin* the resolution adopted on April 2, 1919, which reads as follows:

*Resolved*, That any member of the Buchanan County Medical Society who operates in the Osteopathic Hospital or the Savannah Sanatorium or consults with osteopaths or any unethical cult, be dropped from the roll of membership.

The following resolution proposed by Dr. Minton and seconded by Dr. Schmidt was adopted:

*Resolved*, That this society endorse the venereal clinic.

Dr. Potter moved to amend the motion as follows:

*Resolved*, That the society approves of the venereal clinic, provided the committee for the management of same be composed of three members of the Red Cross Committee, three members of the city board of health, one member of the Buchanan County Medical Society.

This motion prevailed.

The society thereon elected Dr. G. F. Owens as their member of the committee.

Considerable discussion took place regarding the advisability of discontinuing quarantine of smallpox cases and commended the board of health and the school board for their action in excluding children and adults from school who had not been vaccinated for five years, and recommended that the vaccination requirements be made more rigid.

W. F. GOETZE, M.D., Secretary.

#### Meeting of February 4

The regular meeting of the Buchanan County Medical Society was held at the Commerce Club Rooms, Feb. 4, 1920, the president, Dr. Dandurant, calling the meeting to order. The minutes of the meeting of January 21 were read and approved.

A letter from Dr. W. J. Shelton, formerly of DeKalb, relative to his dues and the period of his military service, was read. The secretary was instructed to correct Dr. Shelton's account and see that state membership is procured for the year 1919.

A letter from the city health officer relative to the illegal practice of chiropractors, citing two cases, was referred to the public health and legislation committee.

Dr. Kenney read a communication as follows: "The following members request of the society permission to found a section on Eye, Ear, Nose and Throat. Signed, C. W. Bertram, W. L. Kenney, P. I. Leonard, W. H. Minton, W. C. Proud, E. C. Renaud."

Dr. Elam moved that the request to form a section on Eye, Ear, Nose and Throat be granted. Seconded by Dr. Bell and carried.

The president announced the personnel of the Good Milk Committee as follows: E. S. Ballard, O. C. Gebhart, J. F. Owens.

Dr. Farber reported the history of a patient suffering with lobar pneumonia, a complication of influenza, that developed a complete paralysis of the urinary bladder and rectum on the seventh day. The cause was undetermined. Drs. Kenney and Elam discussed the probable causes of such paralysis.

Attendance 15.

OLIVER C. GEBHART, M.D., Secretary.

#### Meeting of February 18

The regular scientific session of the Buchanan County Medical Society was held at the Commerce Club rooms, St. Joseph, February 18. The president, Dr. Dandurant, called the meeting to order. The minutes of February 4 were read and approved.

The president reported that Mr. Bonham of the Physicians and Surgeons Exchange was present and that he had a proposition to present to the society. On motion Mr. Bonham was granted the privilege of the floor and presented a written report on proposed changes in the management of the Exchange. Dr. Spencer moved to refer this report to the committee on economics which was seconded by Dr. Woodson and carried.

Dr. Woodson presented the subject, "Recognition of the Early Manifestations of Diseases of the Central Nervous System." Discussed by Drs. Leonard, McGlothlan, Bansbach, Higdon and Kenney.

Attendance 18.

#### Society Clinic, February 26

The program, given by the Welfare Board Staff at Noyes Hospital, presented a series of six surgical subjects, was supplemented by Capt. Chris Sampson, M. C., U. S. Army, who has charge of the physiotherapy division of Government Hospital No. 41 at Staten Island. Captain Sampson read a paper reporting in detail the work of his division and also discussed a series of excellent lantern slides that illustrated many interesting phases of his work.

On motion by Dr. Potter the society tendered Captain Sampson a vote of thanks for presenting this very interesting subject.

Attendance 22.

#### Special Meeting, March 1

The special meeting to hear the report of the Public Health and Legislation Committee relative to their investigation of the smallpox isolation hospital and the city isolation hospital located at Twenty-Second and Sacramento Streets was called to order by the president, Dr. Dandurant, at 7:15 p. m., at Commerce Club rooms. A written report submitted by the committee was read by the secretary.

Dr. Elam moved that the society indorse and adopt the report of the committee and that the report be filed by the secretary. Seconded by Dr. Farber and carried.

Dr. Elam moved that the society attend in a body the meeting of the city council this date. Seconded by Dr. Farber and carried.

Attendance 14.

#### Meeting of March 3, 1920

The regular business session of the Buchanan County Medical Society was held at the Commerce Club rooms, March 3. All officers except the secretary being absent the secretary called the meeting to order at 8:20 p. m., and Dr. F. H. Ladd was elected temporary chairman.

The minutes of the meetings February 18, the clinic meeting February 26, and the special meeting March 1, were read and approved.

Dr. Byron T. Quigley, on transfer from Holt County (Mo.) Medical Society, was duly elected a member of this society.

Dr. H. S. Conrad, first vice president, came at 8:30 p. m. and was given the chair.

The secretary read a letter from the secretary of the Missouri State Medical Association relative to the three delegates elected by this society. The present paid membership only entitles this society to two delegates. On motion by Dr. Kenney the secretary was requested to send a letter to the members on the delinquent list stating why dues should be paid at once.

Attendance 14.

OLIVER C. GEBHART, M.D., Secretary.

#### CARROLL COUNTY MEDICAL SOCIETY

On account of an unusually severe and widespread epidemic of influenza in Carroll County, there have been no recent meetings of the society as the doctors were very busy fighting the "flu."

The last meeting was held on Dec. 23, 1919, when the following officers were elected for 1920. President, E. H. Musson, Norborne; vice president, W. G. At-

wood, Carrollton; secretary-treasurer, E. E. Brunner, Carrollton; delegate, J. A. G. Tonge, Wakenda.

Cases reported by Drs. Cook and Samuels were discussed with interest by all present.

E. E. BRUNNER, M.D., Secretary.

#### JACKSON COUNTY MEDICAL SOCIETY

The ninth regular meeting of the year was held March 2, and was called to order by the president, Dr. J. F. Binnie, at 8 p. m.

Dr. Hal Foster read the report of the necrology committee on the death of Frederick T. Reyling. The society, by rising vote, accepted the report and ordered it spread on the minutes and a copy sent to the family.

The following scientific program was given, followed by a general discussion:

##### SYMPOSIUM ON ANESTHESIA

"Preanesthetic Preparation," by W. W. Harrington.

"Heart Lesions and Anesthesia," by Isadore Anderson.

"Selective Anesthesia," by M. H. Clark.

"Postanesthetic Complications," by H. B. Hedrick.

Attendance 85.

PAUL V. WOOLLEY, M.D., Secretary.

#### ST. LOUIS COUNTY MEDICAL SOCIETY

The meeting was called to order at 8:40 p. m. by the president, at Clayton, March 10. The minutes of the previous meeting were read and approved. Present: Drs. Prichard, Eggers, Sudduth, Dunnivant, Trumpour, Sutter, Conway.

Resolutions on the death of Drs. Douglas, Forsyth, and Zuppann, were introduced and adopted and ordered spread on the minutes of the society and copies sent to the State Medical Journal and to the families of the deceased members. On account of the small attendance caused by inclement weather there was no literary program and the society adjourned.

The resolutions follow:

##### James T. Douglas, M.D.

WHEREAS, It has pleased the Almighty to remove from our presence our most respected and revered co-worker, Dr. James T. Douglas, therefore be it

*Resolved*, That in his death the medical profession has lost one of its most loyal and respected members, and the community in which he lived one of its most useful citizens and a public friend who will be sadly missed; that in token of our esteem for our fellow member, these resolutions be incorporated in the minutes of our society and copies be sent to the *Journal of the Missouri State Medical Association* and to the widow of Dr. Douglas.

##### Robert C. Forsyth, M.D.

WHEREAS, It has pleased the Almighty to remove from our presence our most respected and revered co-worker, Dr. Robert C. Forsyth, therefore be it

*Resolved*, That in his death the medical profession has lost one of its most loyal and respected members, and the community in which he lived one of its most useful citizens and a public friend who will be sadly missed; that in token of our esteem for our fellow member, these resolutions be incorporated in the minutes of our society and copies be sent to the *Journal of the Missouri State Medical Association* and to the widow of Dr. Forsyth.

##### Charles Zuppann, M.D.

WHEREAS, It has pleased the Almighty to remove from our presence our most respected and revered co-worker, Dr. Charles Zuppann, therefore be it



*Resolved*, That in his death the medical profession has lost one of its most loyal and respected members, and the community in which he lived one of its most useful citizens and a public friend who will be sadly missed; that in token of our esteem for our fellow member, these resolutions be incorporated in the minutes of our society and copies be sent to the *Journal of the Missouri State Medical Association* and to the widow of Dr. Zuppann.

A. CONWAY, M.D., Secretary.

## BOOK REVIEWS

### PHYSIOLOGY AND BIOCHEMISTRY IN MODERN MEDICINE.

By J. J. R. MacLeod, M.D., Professor of Physiology in the University of Toronto, Toronto, Canada; formerly Professor of Physiology in the Western Reserve University, Cleveland, Ohio; Assisted by Roy G. Pearce, B.A., M.D., Director of the Cardio-respiratory Laboratory of Lakeside Hospital, Cleveland, Ohio; and by others. With 233 illustrations, including 11 plates in colors. St. Louis: C. V. Mosby Company, 1918. Cloth, \$8.

This book ought to be in the library of every scientist and physician who wishes to keep up with the problems of modern medicine. The book discusses the fundamental problems of physiology, chemistry, and pathology which are intimately connected with medicine.

Particularly good are the chapters on blood chemistry, acidosis and the metabolism of proteins. One of the big problems of the day is the study of the endocrine glands. This is ably discussed by MacLeod. He has handled a wide range of subjects with the touch of a master. The chapters mentioned are his best discussions.

R. L. T.

### MODERN SURGERY: GENERAL AND OPERATIVE.

By J. Chalmers DaCosta, M.D., Samuel D. Gross, Professor of Surgery, Jefferson Medical College, Philadelphia, Pa. Eighth Edition, Revised, Enlarged and Reset. Octavo of 1697 pages, with 1177 illustrations, some of them in colors. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, \$8 net.

Whenever a reviewer is confronted with a book that is in its eighth edition he knows that it is not a question of criticism or review but merely a question of determining what makes the book so popular. The reviewer is on trial, not the book.

The reason DaCosta's has reached such an exalted state appears to be, that it covers the whole field of surgery in a very brief and clear way. In seventeen hundred pages the entire field of general and special surgery is reviewed in such a way that the student reading it for the first time will find little that is not at once clear.

The success of the book evidently has made it possible for the publishers to defy the high cost of production, for they sell the book at \$8. None but a large edition book could enable them to do that.

A. E. H.

### MEDICAL CLINICS OF NORTH AMERICA, November, 1919.

W. B. Saunders Co.

This number is devoted to the work performed at the Mayo Clinic and the articles are contributed by members of the Mayo staff and the Mayo Foundation. It contains 294 pages with numerous illustrations. A large variety of cases is reported by twenty-three authors.

**STERILITY IN WOMEN.** By Arthur E. Giles, M.D., B.Sc. (London), M.R.C.P. (London). Senior Surgeon to the Chelsea Hospital for Women, Gynecologist to the Prince of Wales General Hospital, Tottenham. With 11 illustrations. London: Oxford University Press. American Branch, 35 West 32d Street, New York, 1919. Price, \$4.

A most clear and comprehensive monograph on an intensely interesting topic. As the author says in his preface the prevalence of sterility in any community is a serious menace to national prosperity and well being, both by the lowered standard of health of which sterility is the expression, and also because of the loss to the nation of the unborn children. At the present time the subject is of greatly increased importance. Hundreds of thousands of young and virile men, the fathers expected for the next generation, have laid down their lives to save the world from ruin. The cost of the victory is expressed in the pathetic number of young widows and the countless thousands of young unmarried women condemned to perpetual maidenhood. The book is a step in the direction of aiding to make marriage fruitful, not barren.

The question of unproductive marriages is taken up and the importance of the factors of age, duration of married life, and condition of the pelvic organs, is considered. Causes are classified into pathological and clinical. A brief consideration of functional sterility includes impotence of the husband, nonoccurrence of coitus, and dyspareunia.

Malformations are discussed under the head of primary sterility, acquired sterility, including cessations of ovarian activity, trauma, pelvic inflammation, tumors, fibroids, carcinoma, and temporary secondary sterility. The diagnosis of the causes, the prognosis and the treatment, follow in the concluding chapters. A complete bibliography concludes the volume. Many of the subjects are treated from an original standpoint.

G. C. M.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of *New and Nonofficial Remedies*, 1919, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**PASTEUR ANTI-RABIC VACCINE (GILLILAND).**—An anti-rabic vaccine (see *New and Nonofficial Remedies*, 1920, p. 272) prepared according to the method of the U. S. Public Health Service. The treatment consists of twenty-one to twenty-four doses and these are sent separately each day by special delivery. The Gilliland Laboratories, Ambler, Pa.

**PNEUMOCOCCUS VACCINE IMMUNIZING (GILLILAND).**—A pneumococcus vaccine (see *New and Nonofficial Remedies*, 1920, p. 286) containing Types I, II and III, respectively, in equal proportions. Marketed in packages of four 1 Cc. syringes and also in packages of four 1 Cc. ampules, containing 250, 500, 1,000 and 2,000 million killed pneumococci per Cc. The Gilliland Laboratories, Ambler, Pa.

**STAPHYLOCOCCUS VACCINE (ALBUS AND AUREUS) (GILLILAND).**—A staphylococcus vaccine (see *New and Nonofficial Remedies*, 1920, p. 288) containing *Staphylococcus albus* and *Staphylococcus aureus* in equal proportions. It is marketed in packages of four

syringes containing, respectively, 250, 500, 1,000 and 2,000 million killed bacteria in 1 Cc.; also marketed in packages of four ampules containing, respectively, 250, 500, 1,000 and 2,000 million killed bacteria in 1 Cc. The Gilliland Laboratories, Ambler, Pa. (*Jour. A. M. A.*, Feb. 7, 1920, p. 393).

**CHLOROXYL.**—Cinchophen Hydrochloride.—Phenylcinchoninic Acid Hydrochloride.—The actions, uses and dosage are the same as those of cinchophen (see New and Nonofficial Remedies, 1920, p. 224, under Phenylcinchoninic Acid (Cinchophen) and Phenylcinchoninic Acid Derivatives). Chloroxyl is a yellow crystalline powder with an astringent, slightly bitter taste, insoluble in water. Chloroxyl is also supplied in the form of Chloroxyl Tablets 5 grains. Eli Lilly and Company, Indianapolis, Ind. (*Jour. A. M. A.*, Feb. 14, 1920, p. 461).

### PROPAGANDA FOR REFORM

**GRALE'S FRUIT LAXATIVE.**—This is advertised with the claim: "Grale's Fruit Laxative contains only figs, dates, raisins and prunes, a few simple herbs and bran. No drugs at all." Though claimed to contain no drug, the A. M. A. Chemical Laboratory reports that the preparation was found to contain ground senna. Since senna is a well known drug of recognized activity, the claim that the preparation contains no drug is false (*Jour. A. M. A.*, Feb. 7, 1920, p. 410).

**DIONOL.**—The Glorified Petrolatum.—The exploitation of Dionol is based on the theory: (1) The brain is a generator of neuro-electricity; (2) the nerves are the conductors of this electricity; (3) the nerve sheaths are the insulators; (4) wherever there is local inflammation, the nerves are short circuited owing to a breaking down of the insulation resistance of the nerve sheaths; (5) this results in "an escape of neuro-electricity"; (6) Dionol coats the nerve sheaths with a nonconducting layer, and this restores the insulation and "stops the leak." Whether this theory was invented to give a "reason for being" for Dionol, or whether Dionol was first invented and it became necessary to evolve a theory that would give some plausibility to the claims made for this etherealized petrolatum, we are unable to say. In any case, the theory and the product are exploited together. The value of the "case reports" sent out for Dionol may be estimated from a report featured under the heading "Infected Wounds . . ." signed, "Dr. W." This "Dr." appears to be an osteopath whose specialty, according to his advertisement in his local newspaper, is "Catarrhal Deafness and Hay Fever, Acute and Chronic Diseases" (*Jour. A. M. A.*, Feb. 7, 1920, p. 410).

**HYPNO-BROMIC COMPOUND.**—A Vermont physician reports that Hypno-Bromic Compound, manufactured by H. K. Wampole and Company, is sold by druggists without prescription, though it contains in each ounce: cannabis indica, 1 grain; morphin, 0.25 grain; potassium bromid, 48 grains; hyoscyamus, 1 grain; chloral hydrate, 96 grains. He writes that he has three young women who have become addicts to the preparation as a result of thoughtless prescriptions from physicians. By visiting the various drug stores in town, these addicts have been able to obtain an ample supply of the preparation. Hypno-Bromic Compound is more than an unscientific mixture; it is a dangerous product that should not be sold indiscriminately over the drug counter. Physicians who prescribe such mixtures and druggists who indiscriminately sell such stuff are disgracing two honorable professions (*Jour. A. M. A.*, Feb. 7, 1920, p. 410).

**EUPAD AND EUSOL.**—Eupad is a powder composed of equal parts by weight of boric acid and chlorinated lime (containing 25 per cent. available chlorine). Eusol is thus made: (a) 25 gm. of eupad are shaken with 1 liter of water, allowed to stand for some hours and filtered. (2) To 1 liter of water add 12.5 gm. chlorinated lime (25 per cent. chlorine), shake vigorously, and add 12.5 gm. boric acid in powder and shake again. Allow to stand, decant and filter. If the official chlorinated lime containing 30 per cent. available chlorine is used, a proportionately smaller quantity should be sufficient (*Jour. A. M. A.*, Feb. 7, 1920, p. 413).

**INFLUENZA VACCINES.**—The *Medico-Military Review*, a semimonthly mimeographed publication sent to medical officers of the Army by the Surgeon-General's Office, has the following on the use of vaccines against influenza: "You are reminded that so far a comprehensive analysis of results obtained by the use of monovalent and polyvalent vaccines in the prevention of influenza has not demonstrated their value. Much carefully controlled experimental work is now being carried out on this subject both in civil institutions and in the Army, and any worthwhile advances will be reported in the *Review* from time to time. If a prospective vaccine is developed, it will be prepared at the Army Medical School for general distribution and all medical officers will be duly notified. The general use of the present commercial polyvalent protective against influenza is not considered desirable. Numerous telegrams and other requisitions are being received for influenza vaccine. In view of the fact that no prophylactic influenza vaccine is available, such requisitions should be discontinued" (*Jour. A. M. A.*, Feb. 14, 1920, p. 466).

**AUTO-HEMIC SERUM.**—This is an asserted cure for laziness, ugliness, frigidity and many other things. For many years L. D. Rogers, the discoverer of Auto-Hemic Serum, was the chief owner of the National Medical University of Chicago—a low grade school of the "sun-down" variety now out of existence. A few years ago, Rogers was exploiting a cancer serum and selling shares in the "Cancer Research Laboratory and Hospital." In 1915 he exploited a Japanese consumption cure. Then came Auto-Hemic Serum, exploited by means of "The National Society of Auto-Hemic Practitioners" and the "North American Journal of Homeopathy" the official organ of the "Auto-Hemic Practitioners" and of the "American Medical Union." Auto-Hemic Therapy is described as "The Missing Link in Medicine," and "consists in giving the patient a solution made by attenuating, hemolizing, incubating and potentizing a few drops of his or her own blood and administering it according to a refined technic developed by the author." The "technic" of this new therapy may be learned through a mail order course costing one hundred dollars, "cash-in-advance." One of the chief virtues claimed for the serum is that of developing in the patient who takes it an unbounded energy; it apparently makes him want to work himself to death (*Jour. A. M. A.*, Feb. 14, 1920, p. 477).

**EUMICTINE.**—The Council on Pharmacy and Chemistry reports that Eumictine is ineligible for New and Nonofficial Remedies because (1) it is unscientific; (2) it is sold under unwarranted therapeutic claims; (3) the name "Eumictine" is blown in the bottle for the obvious purpose of bringing the product to the attention of the public when it is prescribed in the original package, and (4) the name is therapeutically suggestive and not in any way descriptive of its com-

(Continued on adv. page xxiii)



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SHARP & DOHME

(Continued from page 182)

position. Eumictine is a preparation from the laboratories of Maurice Le Prince, Paris, France, and is marketed in this country by George J. Wallau, Inc., New York. According to the American agent, "each capsule is supposed to contain 20 centigrams of Santalol, 5 centigrams of Hexamethylene-Tetramine" (*Jour. A. M. A.*, Feb. 21, 1920, p. 542).

**DU PONT COTTON PROCESS ETHER.**—Recently the "News Service" of the E. I. Du Pont De Neumours and Co., Inc., circularized the press of the country with a "filler" about "The New Du Pont Ether." The Du Pont Ether and the claims made for it are seemingly based on the work of one man, James H. Cotton, M.A., M.D., Toronto, Canada, who published an article on "Cotton Process Ether and Ether Analgesia." However, Cotton did not give the composition of the "new" ether, nor does his work appear to have been corroborated. In reply to an inquiry from the Secretary of the Council on Pharmacy and Chemistry, the Du Pont Chemical Works declared that the "procedure of manufacture, and the exact composition" of the ether was regarded as confidential information. The use of a therapeutic agent of unknown composition is unscientific and contrary to the best interests of the medical profession and the public, but it is many times more serious for physicians to use a secret or semi-secret substance as an anesthetic.

**BARBITAL (VERONAL) ADDICTION.**—The constant use of even small doses of barbitol (veronal) affects the central nervous system. Those taking the drug habitually become much debilitated and seem less able to stand moderate doses. Death has occurred from a 3 gm. dose in addicts (*Jour. A. M. A.*, Feb. 21, 1920, p. 544).

**ANTIPLASMA.**—A nostrum called Antiplasma or Rudolph's Malarial Specific is being exploited in the South. It is claimed that the preparation was "developed by J. J. Rudolph, M.D.," and that "There is only one way to cure Malarial Fever. Take 15 drops of Rudolph's Malarial Specific on sugar or in molasses, three times daily for six days." The A. M. A. Chemical Laboratory reports that Antiplasma is a pale yellow, viscid liquid having an odor resembling a mixture of oil of turpentine and oil of wintergreen. The preparation responded to tests for rosin, turpentine and methyl salicylate. It was impossible to determine whether the product was a mixture of the three, or some natural turpentine-like product "thinned" with methyl salicylate. The chemists conclude that a mixture of 53 parts of bleached rosin, 41 parts of oil of turpentine and 6 parts of methyl salicylate would probably have whatever anti-malarial properties Antiplasma possesses (*Jour. A. M. A.*, Feb. 28, 1920, p. 618).

**PHARMACY BY ACT OF CONGRESS.**—For years the manufacturers of "patent medicines" have assured us that the alcohol in their nostrums was used only as a solvent, preservative or extractive agent. Thus Wine of Cardui at one time contained 20 per cent. of alcohol and the manufacturer claimed that no more was used than was needed as a solvent and preservative, and that attempts to substitute another preservative had proved futile. Then came national prohibition and now Wine of Cardui contains 10 per cent. of alcohol, and its preservative powers have been fortified by the additional of benzoates (*Jour. A. M. A.*, Feb. 28, 1920, p. 607).

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M. A. BLISS, M.D.

### ORIGINAL ARTICLES

#### NEURITIS, ITS PATHOLOGY, SYMPTOMATOLOGY AND TREATMENT\*

G. WILSE ROBINSON, M.D.

Major M. C.

KANSAS CITY, MO.

The term neuritis is usually understood to mean inflammation of the nerve but Dr. Buzzard has pointed out that this was not its original meaning, the term signifying simply a disease affecting a nerve, therefore it has become customary to include, under the name neuritis, inflammation, degeneration, atrophy and other lesions of the peripheral nerves. The etiology of the condition is most commonly some chemical poison. Any poison freely circulating in the blood or lymph may at times produce its chief effect on the peripheral nerves. It may be caused by lead, arsenic, mercury, copper, phosphorus, or silver, by alcohol, ether, bisulphid of carbon, dinitrobenzol, analin, carbon monoxid, sulphonal and other drugs. It may also be caused by the micro-organisms which produce specific diseases or their toxins. For example, those of diphtheria, influenza, enteric and other fevers, of pneumonia, erysipelas, gonorrhea, syphilis; of the various forms of septicemia and malaria. Of beriberi and leprosy it is an essential part. It occurs, too, in rheumatism, gout and diabetes. The cases of neuritis found in association with anemia, pregnancy, cancerous and other forms of cachexia and with gastro-intestinal disturbances or after overfatigue and exposure to cold and wet also owe their origin to some toxic agency. Focal infections of teeth, tonsils, etc., frequently cause this condition.

Before considering the pathological changes in the inflamed and degenerating nerves I think it well to give a brief description of the current views as to the structure of nerves, the cause of

their degeneration and the course of their cicatrization and repair. The following description is based on the researches of Nageotte and the article by Professor Pitres.

A nerve consists of nerve fibers which constitute the active element of this organ and of connective tissue, but in the nerve these fibers become grouped in bundles. Each bundle is enclosed in a connective tissue sheath, the lamellar sheath. The nerve trunk itself is formed by the aggregation of these bundles and is encased in a sheath of connective tissue called the neurolemma. The nerve fibers of the cerebrospinal nerves are formed by three distinct elements, the axis-cylinder, the medullary sheath, and the sheath of Schwann. The axis cylinder or axone is a ribbon-like, glistening track made up of fibrous fibrillae which give it the appearance of longitudinal striation. Silver nitrate causes a black deposit on its surface. The medullary sheath encloses the axis cylinder forming a sort of sleeve interrupted at intervals corresponding to the annular constriction. Myelin reduces osmic acid and takes on a black color. Finally, outside the medullary sheath is the sheath of Schwann, which is a delicate, transparent membrane bearing on its inner surface nuclei surrounded by a thin layer of protoplasm.

At the level of each annular constriction the nerve fiber consists solely of the axis-cylinder and the sheath of Schwann.

The blood vessels and lymphatics of the nerve circulate between the lamellar sheaths.

There are twelve pairs of cranial nerves and thirty-one pairs of spinal nerves; eight pairs of cervical, twelve pairs of thoracic, five pairs of lumbar, five pairs of sacral, and one pair of coccygeal nerves. Each spinal nerve is formed of a motor and a sensory root, the latter having a special ganglion on it. These two roots unite to form the main trunk of the spinal nerve which almost immediately divides into anterior and posterior parts each carrying motor and sensory fibers.

The posterior branches are smaller than the anterior supplying the skin and muscles of the

\* Read before the Twelfth District Postgraduate Meeting, at Excelsior Springs, Mo., Friday, Oct. 10, 1919.

neck and back, the larger anterior branches unite to form several plexuses. (1) The cervical plexus which is formed by the first four cervical nerves; (2) the brachial plexus is formed by the fifth, sixth, seventh and eighth cervical nerves and part of the first thoracic nerve, the other thoracic nerves not entering into the formation of plexuses; (3) the lumbar plexus, which is formed by the first, second and third lumbar and most of the fourth lumbar nerves; (4) the sacral plexus, which is formed by part of the fourth lumbar, the fifth lumbar, and first, second, third and fourth sacral nerves; (5) the coccygeal plexus, which is formed by a part of the fourth and fifth sacral and the coccygeal nerve.

Neuritis may be very limited in its manifestations involving one nerve or nerve group and it is then known as mononeuritis; or it may affect many nerves, in some cases practically all the peripheral nerves of the body being involved, and in such cases it is called multiple neuritis or polyneuritis.

The anatomical changes within a nerve secondary to an inflammation may be (1) a simple degeneration; (2) parenchymatous inflammation with some evidence of interstitial neuritis, degeneration of nerve fibers, the difference depending on the intensity of the poison and the severity of the inflammation. When the inflammation is mild in grade, the changes resemble a secondary degeneration following section of the nerve. In the more severe cases the changes are those of interstitial inflammation as well as degeneration and these changes vary in degree at different points of the nerve's course. The term segmental or disseminated neuritis has been applied to this form.

In those cases where we find the most severe types of inflammation there is more interstitial inflammatory change, small hemorrhages occur, exudation takes place and collections of leukocytes about the vessel walls and nerve fibers are seen.

The pathological changes of simple degeneration and parenchymatous neuritis cannot be differentiated from traumatic nerve degeneration secondary to nerve section. These alterations which are secondary to nerve injury have been described as wallerian degeneration.

Immediately following nerve section certain changes make their appearance in the central and peripheral ends of the divided nerve. All the nerve fibers of the peripheral segment of the nerve undergo a series of histological modifications. Within twenty-four hours the axis-cylinders of the nerve fibers begin to swell. This swelling makes its first appearance within the immediate neighborhood of the wound but later proceeds to the terminal filaments of the nerve. The fibrils constituting the axis-cylinder grow sinuous and varicose. After the second

day hypertrophic changes occur in the nuclei in the sheath of Schwann. The protoplasm of the nuclei increases in size, attacks the myelin, which is broken up into irregular, brilliant, globular masses arranged around the axone. About the fourth day the nuclei of the interannular segment start on a phase of active proliferation while the myelin becomes more and more broken up and about the fifteenth day it disappears completely.

Within three or four days following section, the nerve fibers lose their excitability to all forms of stimulation such as electrical, chemical, and mechanical, while the muscles do not become irresponsive to stimuli until several weeks or even months after the nerves have lost their excitability.

The axis-cylinders of the peripheral segment are converted into a substance analogous to fat and the medullary sheath undergoing destruction is indicated by black globules, spots and rings. The material which results from the degeneration is partly removed by passage into the lymph tract, partly by phagocytosis. The changes in the central segment are not so extensive as those in the peripheral. The segment of Ranvier, immediately contiguous to the point of section, undergoes degenerative changes almost as severe as those of the peripheral segment. Beyond this the degenerative changes become less severe and their usual limit is the first six segments of Ranvier, although isolated fibers may degenerate far centrally and in some cases involve to a severe degree the cellular structures of the central nervous system.

The proliferated cells of Schwann have an important part in the process of regeneration, only a part of them assuming the rôle of phagocytes while others form spindle cell bands some of which are arranged within, some without the old sheath. The shape of these bands has given rise to the belief or theory advanced by some investigators that they are composed of newly formed nerve fibers which grow out of the central stump while other investigators assume that new nerve fibers are formed from the protoplasm of these spindle cell bands in accordance with Bethe's theory of autogenous regeneration, he having demonstrated that in young animals the autogenous regeneration is perfect, whereas in older animals it is very imperfect. Much has been added to our knowledge of both degeneration of nerves and their regeneration by a study of the vast number of traumatized nerves occurring in the recent war.

Nageotte says the neuroglia sheath of Schwann builds up the nerve and the axis-cylinders proceed to lodge there. It is generally conceded that the newly formed axis-cylinders are sent out from the central segment of the sectioned or degenerating nerve.

In the case of the sectioned nerve the prog-



ress of these fibers from the proximal into the distal segment of the nerve may be seriously interfered with by the separation of the ends of the nerve or by the presence of a more or less dense cicatrix between the two ends of the nerves. These obstacles do not appear in the case of simple degeneration or parenchymatous neuritic degeneration although in some cases cicatricial or exostotic tissue by external pressure on the nerve seriously interfere with the regenerative process.

The process of regeneration is slow in its progress and the motor functions of the nerve must be entirely restored before it is complete.

There have been few necropsies performed in the case of simple localized mononeuritis. Minkowski reports having examined the facial nerve in a case of so-called rheumatic facial paralysis and demonstrated a purely degenerative process in the peripheral nerve branches while the nerve trunk with its geniculate ganglion to the center was normal, the neurolemma not being implicated. In another case Dejerine found degeneration in all the branches while the root was intact. Curschman says in these cases of so-called neuritis, simple degenerative processes in the nerve are much more frequent than purely inflammatory change, and that true inflammation is found especially in those cases in which the vicinal inflammation has extended to the nerve, extended lymphogenous neuritis, a neuritis emanating from infected wounds and in local influences of chemical poisons. The nerve in such a case is turgid, reddish, while the microscope reveals hyperemic and exudative and even suppurative infiltrations, the parenchyma soon participating in this process, and occasionally bacteria may be found in the nerve trunk. It is impossible to distinguish between perineuritic, interstitial neuritic or nodular forms of local neuritis according to the degree to which the perineurium or the endoneurium participate or according to the form of the nerve swelling. The parenchymatous degeneration takes on the form of a lighter degree or character of periaxial decay. The axone is not anatomically destroyed but there is usually temporarily at least physiological interruption, the mobility soon returning after the cause of the disturbance has been removed, but even if the duration of the injury be longer as in pressure due to a callus and the like, the disease may remain in its lighter stage and under proper treatment permit of a very favorable prognosis.

Associated with and depending on the nerve degeneration secondary to a neuritis certain pathological changes occur in other structures. The most important of these are trophic, vasomotor and secretory disturbances and are manifested as muscular atrophy, gangrene, bed sores, perforating ulcers, eruption of vesicles, and glossy skin which was first described by Wier

Mitchell as observed by him in the case of soldiers during the Civil War having traumatized nerves.

Any of the various cranial nerves may be affected by inflammatory or degenerative processes and present the pathology of a neuritic degeneration. Occasionally tumors arise on these nerves being either primary or metastatic, or the nerve trunk may be injured through arteriosclerotic changes in the vessels, aneurysm in the internal carotid and other arteries, or by tumors of the temporal lobes and abscesses affecting the nerves of the base. Thrombosis of the cerebral sinus, particularly of the sinus cavernosus, frequently lead to paralysis of the eye muscles. Such diseases of the orbit as inflammation, tumor, or tumor-like structures, may injure the motor nerves of the eye, or any of the cranial nerves may develop a sclerotic degeneration secondary to a fracture at the base of the skull or they may be injured by trauma producing hemorrhage within the nuclear region, while syphilis may also be a cause of neuritic degeneration.

#### THE SYMPTOMATOLOGY

The symptoms of simple or neuritic degeneration of the olfactory nerve is anosmia or loss of smell with some disturbance of the sensation of taste. The neuritic degenerations of the optic nerve have a somewhat varied symptomatology. The first pronounced symptom being a disturbance of vision sometimes total blindness, or peripheral defects in the field of vision, sometimes disturbance of central vision without impairment of the peripheral parts of field of vision called central scotomata, atrophic changes may occur relatively early and appear as a choked disk or as a trophic discoloration.

Neuritic degeneration of the third, fourth and sixth cranial nerves results in ocular palsy. This may be complete of the eye affected if all of the three nerves are involved in the degenerating process. If the third nerve alone be affected the most prominent symptoms are ptosis, with external strabismus and dilated pupil. If the sixth nerve is involved the external rectus is paralyzed, if the fourth is affected there is paralysis of the superior oblique. Neuritis of the fifth cranial nerve may be accompanied by most severe pain in its area of distribution although the symptoms are usually limited to the area supplied by one of the three divisions.

If the functions of the inferior maxillary branch be seriously impaired, there is also paralysis of the muscles of mastication on the affected side. That most severe type of neuralgia, known as tic douloureux is generally regarded as a symptom of a low grade inflammatory process of one or more branches of this nerve. Physiological interruption from any cause results

in loss of sensation over the area supplied by the affected nerve or division affected.

The seventh cranial or facial nerve is frequently a victim of neuritis or neuritic degeneration, the most outstanding symptom of which is that form of facial paralysis known as Bell's palsy.

The clinical picture of neuritic degeneration of the eighth cranial nerve varies in accordance with the degree and extent of the degenerative process. If the cochlear division alone be involved, the principal symptom is loss of hearing. If the vestibular nerve alone be affected, the principal symptom is disturbance of equilibrium. If the entire nerve undergoes neuritic degeneration, there is deafness, vertigo, and tinnitus giving the clinical picture of Meniere's symptom complex. There is nystagmus toward the healthy side and the patient falls toward the affected side. If degeneration impairs the function of the glossopharyngeal nerve there is disturbance of taste on the posterior third of the tongue and of the sensation of the pharynx. The symptoms of vagus degeneration are best studied from the point of view of the disease of the single branches of nerve which are most frequently affected alone. The entire involvement of both laryngeal nerves results in severe inspiratory dyspnea due to paralysis of the muscles of the larynx supplied by the recurrent laryngeal nerves, paralysis of the muscles of the pharynx with loss of the power of deglutition, inability of the patient to talk, and anesthesia of the larynx, the patient usually dying soon of vagus pneumonia. Tachycardia and nausea are also symptoms commonly seen in bilateral neuritic degeneration of the vagus.

The spinal accessory nerve may also undergo neuritic degeneration. The prominent symptoms are paralysis of the trapezius and sternocleidomastoid muscles of the affected side.

A degenerative lesion producing a function of the hypoglossal nerve gives unilateral paralysis of the tongue.

The phrenic nerve may undergo neuritic degeneration, the symptom of which is unilateral paralysis of the diaphragm. If this paralysis be limited to one side of the diaphragm the symptoms are very slight, but if it be bilateral, dyspnea is severe and most distressing, diaphragmatic breathing absent and the respiration being entirely thoracic.

The symptoms of neuritic degeneration of the spinal nerves varies with the cause, nature, and location of the disease.

The general symptoms of a simple local neuritis are usually pain, of a stabbing, darting character over the area of distribution of the nerve involved with some pain and tenderness along its course. This pain is due in part to pressure and irritation of the *nervinervorum*. It may be most severe and distressing or mild in

character causing little or no inconvenience. There may be edematous swelling and redness of the skin over the area of greatest inflammatory activity. Trophic affections of the skin and sometimes effusion into, with swelling of the joints. There is disturbance of local sensation such as numbness and formication.

The muscles supplied by the nerve show varying degrees of dysfunction from mild weakness to complete paralysis. Muscular twitchings and spasmodic contractions are occasionally noticed. In long continued cases there may be extreme atrophy of the affected muscles followed by contractures of the fingers, toes, or other parts involved. The hair and nails are often affected leading to falling out of the hair and occasionally dropping away of the nails. In the mild forms the electrical reaction may not vary from normal but in extreme cases there is reaction of degeneration partial or complete.

The muscles paralysis is flaccid in type, the prominent symptoms may pass off within a few days or persist for many months. Recovery is generally the rule if the cause can be removed.

Neuritis within the domain of the cervical plexus presents a varying combination of motor and sensory symptoms within the area of distribution of the first, second and third cervical nerves. The most important nerve here is the phrenic which has been previously mentioned.

Occipital neuritis may be the cause of a most distressing form of occipital neuralgia.

Neuritis and neuritic degeneration within the domain of the brachial plexus may involve single nerves, nerve groups or the entire plexus. Of the branches originating above the clavicle that may be affected, the long thoracic nerve is the most important. The clinical symptoms of a function of this nerve are paralysis of the serratus magnus muscle. Mechanical influences may cause this condition or it may be of toxic origin. The shoulder blade of the affected side stands a little higher than normal and its inner edge is closer to the spine. Ability to raise the arm is impaired, it cannot be lifted higher than the horizontal position.

If the circumflex nerve is affected and its function impaired the deltoid is paralyzed and sensory disturbances over the area of its superficial distribution are observed.

The musculospiral nerve is one of the most frequent nerves affected by local inflammatory lesions. Fracture, trauma, pressure, and toxic infectious influences are usually responsible. The motor symptoms are wrist drop due to paralysis of the extensor muscles of the fore arm, with impaired function of the supinators and abductors of the thumb. Sensory changes are very slight.

Neuritis of the median nerve may result from the same causes. Ascending neuritis from infected wounds near its terminal filaments is



especially observed in this nerve. The pain of median neuritis may be most severe and persistent. The so-called causalgia which is a painful affection of the nerve secondary to a traumatic neuritis is frequently observed within the area of the median. The glossy skin of Wier Mitchell is more commonly seen associated with median neuritis than that of any other nerve. The motor symptoms of a median neuritis are impaired or lost stability to pronate the forearm, to flex the wrist excepting by a simultaneous adduction, the second and third phalanges excepting of the last two fingers cannot be flexed. Sensation is involved over the radial side of the palmar surface of the palm of the hand and over the first and second fingers.

Neuritis of the ulnar nerve of sufficient severity to impair or destroy its functions produces the ordinary symptoms that are associated with an ulnar paralysis. The motor symptoms are restricted to the interossei and lumbricales muscles of the hand, the adductor pollicis, the flexor carpi ulnaris and the flexors of the last two fingers with sensory loss over the little finger and half the ring finger and over the palm on the ulnar side.

The three main group types of nerve lesions in the domain of the brachial plexus are: the upper lesions of the brachial plexus or Erb's type, the lower brachial plexus or Klumke's type, and complete lesions of the plexus. The motor symptoms associated with the upper type lesions are paralysis of the deltoid, biceps, brachialis internus, sometimes the supinator brevis and infraspinatus. The motor symptoms of lesion of the lower brachial plexus are paralysis of the small muscles of the hand with enophthalmos miosis and anesthesia in the domain of the ulnar and median nerves and sometimes impaired functions of the forearm and wrist. Total lesions of the brachial plexus causing complete paresis of the arm and hand are rarely the result of inflammation but are usually traumatic in origin.

Neuritis of the thoracic nerves below the first is known as intercostal neuritis and is of quite frequent occurrence. Its most painful form is that associated with herpes zoster. Pressure on the nerve by the adjacent bony structures is quite frequently responsible, trauma and toxic and infectious influences also cause the condition. I have seen a considerable number of cases secondary to the recent "flu" epidemic. If several nerves are involved, intercostal respiration may be impaired or if the lower thoracic nerves are affected there may be paralysis of the abdominal muscles. The pain may be most persistent and severe and painful spots can be located just external to the spine in the axillary line and along the edge of the sternum.

There is a very distressing form of brachial neuritis without motor disturbances in which

the pain radiates from tender points over the shoulder and scapula down the arm; because of the pain of movement, the extremity may be seriously disabled. This condition may be extremely chronic and most obstinately resist all forms of treatment.

Of the nerves of the lumbar plexus that may be affected by neuritic degeneration, the anterior crural is the most important. Lesion of this nerve results in the paralysis of the quadriceps femoris muscle, loss of the patellar reflex and anesthesia over the anterior aspect of the thigh. The obturator may also be affected resulting in paralysis of the pectineus and adductor muscles of the thigh. The lateral femoral or external cutaneous nerve of the thigh may be affected by neuritis giving the clinical picture known as meralgia paresthetica. The patient complains of unpleasant sensations over the external aspect of the thigh and in some cases cannot stand the weight of the clothing or have anything whatsoever against the area supplied by the nerve.

Of the nerves of the sacral plexus, the great sciatic is the one most generally affected by neuritis. You are all well acquainted with the symptoms of the so-called sciatica or sciatic neuritis with its accompanying pain and disability. If the neuritis be so severe as to seriously impair the function the most prominent symptoms are foot drop, pain, tenderness along the trunk of the nerve, and impairment of sensation over the toes, ball of the foot and dorsal aspect of the calf.

Causalgia within the domain of the peroneal or external popliteal nerve has been frequently observed secondary to lesions of the sciatic or the peroneal which do not cause complete anatomical or physiological interruption.

In a discussion of simple local neuritis, particular mention should be made of occupation neuritis. This occurs most frequently in workers who handle continuously a certain tool, the handle of which they must grasp, the small muscles of the hand suffering from both strain and pressure. Locksmiths, borers, planers, cutters are the most usually affected. Touch paralysis is another type. Also paralysis of the left thumb is occasionally seen in drummers.

The symptomatology of polyneuritis. The symptoms of a polyneuritis vary considerably from those of a mononeuritis. Individual forms of polyneuritis are several, the most important of which are those of exogenous intoxication, endogenous intoxication from infectious diseases, idiopathic polyneuritis as seen in Landry's paralysis, beriberi and the polyneuritis of leprosy. Alcoholic polyneuritis is the most common form. This occurs most frequently in the case of spirit drinkers but may occur in the case of those who drink beer and wine. The early symptoms are paresthesia in the legs with severe pain and weakness. The symptoms may come

on acutely or advance very slowly. The acute cases are often accompanied by fever. The pains are most intense, drawing and tearing in character. The motor symptoms at first appear as weakness in walking, with symptoms resembling the so-called intermittent formication. In the further progress of the paresis, walking becomes impossible and the patient is confined to his bed. The upper extremities become weak but are rarely so extensively involved as are those of the lower extremities. Usually there is wrist drop, also toe drop. In the most severe cases the muscles of the trunk are also involved, abdominal muscles may be paralyzed so that rising from a recumbent posture or sitting is impossible. The phrenic nerve may be involved, or the cranial nerves of the vagus are most usually affected. Facial paralysis either unilateral or bilateral is not uncommonly seen. Deformities and contractures may be observed. The paralysis in all cases of neuritic paralysis is flaccid in type. Reaction of degeneration is usually present. Nerves extend over the course and all forms of sensation are complete.

The mental symptoms of this condition, known as Korsakow's syndrome, are of the type of delirium with confusion.

The pains of an alcoholic neuritis may be burning or shooting in character or paroxysms of darting pains may occur in the extremities or the patient may suffer from griping pains in the abdomen accompanied by vomiting which resemble a gastric crisis of tabes. The nerve trunks may be tender to pressure along their course. The knee jerks in the later stages are lost but may be exaggerated at the first. The sphincters are usually not affected. There may be severe sensory loss over the skin area of distribution of the affected nerve.

Arsenical neuritis may follow a large single dose of arsenic but usually occurs after taking small doses over a long period of time and the symptoms of multiple neuritis may be preceded for a few days or weeks by other symptoms of arsenical poisoning such as vomiting, diarrhea, conjunctivitis, bronchial catarrh and various skin lesions. In most respects the symptoms are similar to those of alcoholic polyneuritis, painful cramps and muscular hyperesthesia, but the skin lesions of arsenical differ considerably from those of alcoholic polyneuritis. There is frequently edematous swelling with redness and severe trophic changes of the skin. A paralysis usually begins in the lower extremities involving the upper extremities secondarily. The extensor muscles of the forearm and leg are most severely affected giving the symptoms of wrist and toe drop. The paralysis is flaccid in character, the deep reflexes being absent. Practically all the muscles of the body may be involved and paralysis of the intercostal muscles and diaphragm may occur. The mental condition,

unless complicated by alcohol, is usually normal. The course and duration is similar to that of alcoholic neuritis, recovery being the rule although it may be only partial as contractures may persist.

*Lead Neuritis.*—The most prominent symptom of lead neuritis is wrist drop which is usually bilateral and symmetrical. The symptoms are typically motor and it is generally regarded as more of a radiculitis of the ventral roots than of a true neuritis. It may become generalized and involve in the paralytic process practically all of the musculature. It is usually associated with constipation, headache and colicky pains and severe anemia. The paralysis may be preceded by local sensory phenomena the patient complaining of numbness and tingling in the extremities, cramps in the muscles, pains in the joints and tenderness along the source of the nerve. Alterations of cutaneous sensibility are usually absent. The severity of the symptoms may vary in different localities, the most severe manifestation being within the domain of the extensor muscles of the extremities. In the upper arm type the deltoid, biceps, and brachial anticus and supinator longus are chiefly affected. In the Aran-Duchene type the small muscles of the hand are paralyzed and atrophied. In the peroneal type the extensor muscles of the lower limbs are affected giving a characteristic toe drop. Some of the cranial nerves, namely, the optic, oculomotor, and laryngeal nerves may be degenerated. In the general type all the muscles of the extremities and some of those of the trunk are paralyzed and atrophied.

*Diphtheritic Polyneuritis.*—Some writers allege that in 15 per cent. of all cases of diphtheria some form of neuritis occurs but the percentage is perhaps much higher, if attention is given to all cases of muscular weakness following infection. It usually appears about a fortnight after the onset of the infection and the most characteristic symptom is the early involvement of the soft palate. The oculomotor nerve may be affected, likewise the vagus branches to the pharynx, and one or more of the limbs may become paralyzed, this paralysis affecting chiefly the distal portions of the limbs, and wrist and toe drop are very common symptoms.

The sensory changes are numerous with cutaneous anesthesia in the distal portions of the limbs. Rarely the anesthesia may be severe and widespread. The diaphragm and intercostal muscles may be paralyzed, seriously embarrassing respiration. A serious complication is bulbar crisis. The voice becomes weak and hoarse, respiration previously natural may give warning of danger. It is not necessarily rapid but expiration is less forceful. These crises are



quite frequently fatal. Cardiac failure may result from failure of the vagi and bulbar crisis, recovery is usually complete but is occasionally partial. Death may result from respiratory or laryngeal paralysis.

*Influenza and Neuritis.*—Neuritis quite commonly occurs during influenza epidemics and may be local or multiple. As stated above, the painful types of intercostal and brachial neuritis are of very frequent occurrence.

Other types of multiple neuritis are the tubercular, puerperal, gonorrheal, septicemic, erysipelatous, syphilitic, senile, cancerous, rheumatic, gout, malarial, typhoid fever, in fact, any infection may be a cause of multiple neuritis.

Multiple neuritis may also occur as a result of the intoxication associated with diabetes.

The sciatic nerve is most usually affected although a brachial neuritis is not of uncommon occurrence. There may be some loss of sensation with muscular weakness but rarely paralysis. The pains are severe and distressing.

Progressive hypertrophic interstitial neuritis is a rare disease, occurs chiefly in children, is usually familial in type, slow and progressive in its course, the symptoms are ataxia of all four of the limbs with muscular atrophy, lightning pains, marked tenderness along the nerve trunks, anesthesia, hardness and hypertrophy of all the nerve trunks. There is nystagmus, myosis and Argyll Robertson pupil. The tendon reflexes are lost, sphincters are not affected.

Polyneuritis is an essential part of leprosy and beriberi. There is muscular wasting, anesthesia, with mutilation of the fingers and toes, in the leprosy neuritis. In the beriberi type the lower limbs are chiefly affected, but the upper limbs may be also involved. There may be facial paralysis and involvement of the larynx and the eyes. There is some skin anesthesia but this is usually not severe but edema and burning and tingling sensations of the skin are quite common.

#### TREATMENT

This may be divided into several phases, such as preventive, medical, operative, electrical and mechanical.

*Preventive Treatment.*—It has been my observation that many persons suffering from the many forms of neuritis are poor water drinkers and it is my opinion that the drinking of an abundance of water will aid materially by preventing the accumulation of toxic and septic materials within the system, and thus prevent in many cases the development of neuritis. Excessive fatigue, muscular strain, exposure and pressure on the nerve trunk should, in so far as possible, be avoided. The introduction of those toxic substances known to produce neuritis should be prevented. Many cases of lead neu-

ritis have developed as a result of the use of face powders and hair dyes containing lead. I have seen several cases following the long continued use of flake white. There are many evils following the excessive use of alcoholic liquors not the least of which is multiple neuritis and the manner of prevention of this form of neuritis is very obvious. Infected teeth and infected tonsils should be removed.

The treatment of diphtheria by antitoxin has been found to lessen the occurrence of diphtheritic neuritis. Arsenic should not be given in large doses or over long periods of time in chorea. It is really of no therapeutic value in this condition.

*Medicinal Treatment.*—Alkalis, such as bicarbonate of soda in large doses with abundance of water, are usually beneficial in all forms of neuritis. Atophan, pyramidon are helpful in controlling the pain. Quinin should be used in malarial neuritis, iodids of mercury in syphilitic, iodids and sulphates in lead neuritis, and salicylates in rheumatic neuritis. After the acute stage is passed, strychnin is usually helpful, also iron in the form of Bland's mass and other tonics.

*Operative Treatment.*—Sciatic neuritis may usually be quickly cured by injecting into the nerve sheath at the sacrosciatic notch 100 c.c. of normal hot saline solution. Causalgia yields to the intraneural injection of 50 per cent. alcohol. Tic douloureux is promptly relieved by an injection of 80 per cent. alcohol into the sheath of the affected nerve. Many forms of brachial neuritis are relieved by the daily injection in the suprascapular region of a 3 grain ampule of sodium cacodylate. If there be tender spots over the scapula from which the pain radiates down the arm on pressure, the injection of a few drops of a 4 per cent. solution of novocain followed by a few drops of 80 per cent. alcohol down to the bone at the point of greatest tenderness will in some cases promptly and effectively relieve the pain.

*Electrical Treatment.*—Electricity should not be used in the acute stage of neuritis; after the passage of the acute stage the d'Arsonval or high frequency currents relieve pain as does a mildly galvanic current if the electrodes have been wet in a saturated solution of sodium salicylate and applied along the nerve trunk. The interrupted galvanic and faradic currents if applied to the paralyzed muscles aid in the prevention of atrophy and in the restoration of the muscles.

*Mechanical Treatment.*—During the acute stage the patient or the affected portion of the body should be kept at rest. In brachial neuritis it is best that the arm be kept in a sling. In all forms of polyneuritis the patient should be confined to bed until after the acute stage is

passed. This is also advisable in acute mononeuritis of the lower extremities. Heat, either moist or dry, relieves pain and reduces the inflammation. Radiant electric heat is especially beneficial. Massage should not be used until after the subsidence of the acute process. Deformities of the limbs should be prevented as they are chiefly responsible for the permanent disabilities after neuritis. In many cases of neuritis even of the multiple type, the extensor muscles are weakened to a greater degree than are the flexors. If there be a difference in degree of paralysis of opposing groups of muscles, there is a tendency on the one hand toward hypershortening of the less paralyzed group and hyperstretching of the opposing group. This overaction must be prevented for the following reasons: (1) It prevents complete rest of the anterior horn cells; (2) the overstretching of the affected muscles interferes with their recovery. The limb must therefore be put in such position as will bring about relaxation of the paralyzed muscles, but as William McKenzie points out, relaxation is only the beginning of treatment, more than this is required and that is reeducation of the paralyzed muscles. A paralyzed muscle that is constantly stretched is at a disadvantage and will not recover its power and tone. Posture is therefore the great factor in securing physiological rest of the muscle and it is important to consider what is the zero position of any given muscle. McKenzie defines the zero position as the position of anatomical rest in which the individual muscle itself is relaxed and both its own actions and that of its opponents prevented. Sherrington has shown that the distribution of tonus is arranged on a plan of strict coordination, and that reflex tonus embraces those movements which counteract the effect of gravity and that postural contraction can be maintained for long periods without fatigue. A position which can be maintained without fatigue must be the position of rest.

Rest, posture and reeducation are then the important methods of treating muscles which have been paralyzed by neuritis. Numerous methods have been adopted for keeping the paralyzed muscles at rest and in a state of relaxation. Some consider rest in bed as sufficient, others place the limbs between sand bags, others place boards at the bottom of the bed to keep the foot in a dorsiflexed position. Various splints of metal and other material have been used. Some have used plaster-of-Paris molds. The celluloid splints as used in the treatment of the paralysis of poliomyelitis are usually very satisfactory in meeting the two principal conditions, namely, putting the paralyzed muscles in the most favorable position for their speedy recovery and the prevention of deformity due to muscular shortening.

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## SURGICAL TREATMENT OF GOITER\*

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It shall be my endeavor in reporting my personal experience with surgery of the thyroid gland to put myself in my auditors' place and confine myself to what I should value in the experience of another, namely, something which I could apply to the needs of my clientele. It may be stated in passing that I shall deal with impressions gathered during the recent years, rather than with exact statistical figures.

In a private practice, which until recently was scattered over a number of St. Louis hospitals and the surrounding country, it was impossible for me to keep on a small percentage of my patients such exact and detailed records as are available on most of them. The percentage of error is, however, not so large as to greatly influence results, and I am safe in saying that I have done a little over 400 operations, while the material for study is 315 patients, all but about thirty of whom were operated on by me personally, the rest having been handled by my associates and assistants. I know definitely of fifteen who died in the hospital, making a mortality of something over 4.7 per cent. if reckoned according to the operations. These figures correspond pretty well to those which seem to attend the work of others of equal experience, hence they are not worthy of further note.

It is impossible to say just what percentage of my goiters were of the toxic variety, since a given patient so frequently manifests a varying picture on different occasions. A very large majority of the individuals here considered, however, were surely of the toxic type; a simple goiter has been so uncommon in my experience as to elicit a comment from all those who have worked with me.

It seems that the study of goiter is rather pertinent in our community since we, situated at the confluence of the Mississippi and the Missouri rivers, are in the center of a fairly well-pronounced endemic goiter region. It has appeared to me that my own material is drawn rather definitely from certain centers situated in the valleys of these two streams.

Endemic goiter is, as most authorities agree, traceable to something in drinking water. It may be shown in the experience of any one who has the material and will take the trouble to investigate the etiology, that the drinking of water from a certain well seems to have produced goiter in all those dependent on it, while neighbors getting their water from a cistern regularly have not been so affected. It is not difficult to show that those who have moved away from the affected water supply have recovered from the disease, while healthy persons moving to it have

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fallen victims to the malady. It is not difficult to demonstrate that the boiling of the contaminated water leads to remissions in those affected for as long a time as this precaution is taken. People living along the upper reaches of a stream may have the disease, while those living near the mouth of the same stream do not acquire it, this going to show the evanescent character of the poison of whatever nature it be.

I shall not go into a discussion of the bacterial or chemical theories which have been advanced in this connection. My own experience with three sisters very recently, as well as two sisters in another family, and mother and daughter in another, calls to mind very sharply the family tendency in this direction; while all, of course, who are doing this work are constantly reminded that goiter is, to a very large extent, a disease affecting the weaker sex.

The influence of strain has been strikingly brought out by the results of the great war. My work in the U. S. Public Hospital Service where discharged and invalided soldiers are cared for, demonstrates very clearly that persons who under normal conditions were thought to be healthy were prone to develop thyrotoxic symptoms when under unusual mental and physical stress. Another interesting feature which has come out of my own material is that several of the very few male cases which have come to my attention have been among city firemen, a class of men who are usually exposed to danger and stress of every kind.

Sporadic toxic cases have been common in my experience in connection with almost all of the ordinary surgical lesions. I can recall offhand carcinoma of the breast, myoma of the uterus, chronic appendicitis, tonsillitis, chronic cholecystitis and others with such frequency in my goiter patients, that it long ago impressed itself on me that such individuals were never to be seen and dismissed with a mere study of the thyroid and its attendant symptoms, but rather that every individual must be subjected to a careful general examination.

The *pathogenesis* of this disease may be stated in passing to be obscure. We know that it affects simultaneously the ductless glands, the nervous system and sometimes certain of the glands having ducts. The correlation or teamwork of the whole endocrine system was brought out in a very interesting manner by one of the most severe thyrotoxic patients whom I have ever seen. She had a large goiter and all the typical symptoms, there being at the same time such an outspoken bronzing of the skin as to suggest alteration in adrenal functions. The most interesting feature about this case was the observation that an almost complete thyroidectomy led not only to a disappearance of toxic symptoms, but to a return of wholly normal skin appearance at the same time.

Reference was just made to the question of other diseases being associated with thyrotoxicosis. This in my experience has opened the question many times as to whether the thyroid affection might be considered primary or secondary to one of the other lesions mentioned. Wherever the truth may lie concerning this matter the practical upshot is the same, since I cannot remember a patient whose goiter toxicity was cured by the removal of the distant focus, and I can certainly recall a very large number in whom the toxic symptoms were absolutely abated by the removal of the thyroid, even though the second cause of disease remained until it was remedied by a secondary operation of whatever nature required.

Recently metabolic studies have been made on my patients by Dr. Neilson which furnish most interesting data of the kind which one might be led to expect after learning to note that these patients are speeded up as far as all their external manifestations go.

These patients have been studied according to a routine chart, which embraces the following symptoms: Nervousness, tremor, dyspnea, palpitation, tachycardia, vomiting, diarrhea, insomnia, sweating, prominent eyes, edema, loss of strength, headache, pain, as well as the following physical signs: goiter, eye manifestations, vocal cord changes, evidences of pressure in the neck, thrills and bruits of thyroid vessels, heart changes, pulse rate, skin, hair and nail alterations, exophthalmos, body weight changes, blood pressure, roentgen-ray examinations of thyroid and trachea in certain cases. The ordinary blood examinations, urinalysis, etc., are taken as on every patient, but these are not referred to in checking up final results.

One who studies the type of goiter patient seen in St. Louis will very soon be impressed by the fact that no two typical pictures are alike, because certain of the symptoms and physical signs just mentioned are susceptible of an endless number of combinations in given individuals. Very many of my toxic patients present no exophthalmos and seem never to have done so. However, it must be added that the patient with exophthalmos of marked degree is almost always very seriously ill. Thrills and bruits in the thyroid vessels are almost always present in the exophthalmic patient, and rather rare in the toxic individual whose eyes are normally placed, but when present in this last type I have come to look on this manifestation as an indication that exophthalmos will develop later. A patient who is seen at one time may have only one or two toxic symptoms and later may develop some or all of the conditions, hence it will be seen that there is every gradation in this vicinity, from the ordinary simple to the outspoken toxic exophthalmic case presenting the complete picture. The ordinary thyroid tumor,

with not one systemic symptom, and the patient presenting the outspoken complete picture, are easy to classify, but this is by no means true of the many intermediates which present one or more toxic symptoms at certain times.

Very many of my toxic patients have impressed me with the fact that they had a thyroid tumor before any systemic symptoms appeared, in consequence of which I am beginning to believe that thyroid overgrowth, of whatever nature, is prone to result in later toxic developments of almost any kind or degree, hence I am inclined to be a little less conservative in the advice given such individuals than was formerly the case.

My observation of certain patients who have refused operation in acute toxic attacks has been that they frequently recover with treatment, without it, or in spite of it, and pass through a number of interesting, free intervals and toxic cycles before they either die, or the thyroid is, to quote Grotti, "burned out" and a state of hypothyroidism instituted. The duration and intensity of the toxic phase have differed markedly, as has the duration of free intervals.

One patient in particular is remembered, who seemed at death's door, with the outspoken picture and then without treatment went over into an interval of apparent good health, but this lady after recovering sufficiently to conduct a boarding house for more than a year suddenly developed another toxic phase and died without surgical help.

It is impossible in a paper of this length to dwell further on the symptoms which have presented themselves to my notice, but one must not omit to mention the severity of the cardiac and parenchymatous damage which is possible in those in whom the acute attacks go on unchecked. I remember many women in whom persistent tachycardia had been followed with so much circulatory derangement that ascites, anasarca, as well as all the other signs of decompensation, have been most marked. These heart cases, and the patients with outspoken acute thyrotoxic mental derangements, are those which impressed me as being most urgent in the series.

One occasionally sees evidences of hyperthyroidism and hypothyroidism in the same patient. In such instances the hypo symptoms cannot be explained on a deficiency basis, as is simple enough where too much thyroid has been removed. It is rather a qualitative than a quantitative matter, and means that a perverted thyroid secretion is at fault. This subject is very much clearer since the discovery of Iscuresco of different lipoids in the thyroid, one of which will produce hyposymptoms and another hyper-symptoms if injected into the same individual.

The diagnosis of thyrotoxicosis is by no

means always simple, as one may infer by our remarks on the symptomatology. It has at times been very difficult to differentiate from acute tuberculosis, as well as nervous derangements, particularly dementia praecox. It may be interesting to note that the first cases on record of the kind we are discussing had originally been diagnosed as acute tuberculosis. I must admit that in a very few instances the diagnosis has not been definitely made in my own experience, until a well-meant thyroidectomy failed to relieve what proved to be a cardiac condition *per se* instead of typical tachycardia and palpitation of Graves' disease. The same is true in one instance of dementia praecox. However, the study of endocrinology is believed to be still in its infancy, and no doubt other operators have erred in this same manner.

The indications for treatment which occur to me as a result of my experience change within certain limits from time to time, and with growing experience I may still have reason to alter them somewhat, but for the last few years it has seemed to me rather reasonable to refer for medical care, if a surgeon may take the liberty, the simple or mildly toxic cases occurring at puberty, menstruation, pregnancy or the menopause. I am sure that no symmetrical goiter of small size, which contains no nodules or cysts and gives no local or general symptoms, is alone an indication for surgery. There will surely be no conflict of medical and surgical opinions as to toxic patients who are wildly restless or who present a maniacal phase, or those who show so many evidences of post-thyroid damage as to be incurable. I refer, of course, to advanced cardiac and renal patients. It surely would not occur to any thoughtful surgeon to operate on such individuals because the risk is too great and the possibility of gain too small.

Those who seem to me as well as, I am sure, to other surgeons to be fit subjects for operation are: (1) patients suffering from thyroiditis; (2) those presenting nodular adenomata or cysts; (3) those in whom cosmetic needs are apparent; (4) sufferers from intrathoracic tumors; (5) those in whom local symptoms are marked; (6) patients whose tumors are growing rapidly; (7) the subjects of marked hyperthyroidism, and these I believe should be given the benefit of medical treatment for a brief period to see if they cannot be very markedly improved in a short time. I think, however, it is unfair to subject this class of patients to months of invalidism under the guise of a medical attempt to benefit them. By local symptoms under No. 5 I have meant pressure on the pharynx or esophagus which interferes with swallowing, pressure on the trachea which interferes with breathing, pressure on the recurrent nerves which interferes with voice and produces coughing, pressure on the great vessels of the



neck interfering with the circulation, pressure on the sympathetic, phrenic and vagus nerves in the neck with their well-known consequences.

The surgery of the first six types is purely mechanical, though the problem is not fully solved when we have established an operative need in toxic patients. We must go further and determine just *what* to do. I have performed ligation of the superior thyroid vessels seventy-eight times, not simply because a patient was too sick to remove all or a portion of the thyroid, but because in addition to this consideration there was a marked thrill and bruit, indicating disease of the vessels in question. With the exception of four such patients who failed to get out of the hospital alive, I have done a thyroidectomy later on in all but two of these individuals. A few months after ligation they had gained weight and improved so rapidly that this more severe operation seemed relatively safe. One of the two cases just mentioned will be back when a sufficient interval has elapsed, but the other still remains in absolutely perfect health five years after a double ligation, and refuses to have anything further done. I am still at a loss to know whether a ligation, diminishing as it does the circulation of the thyroid to a relatively slight extent and interrupting to a correspondingly slight extent the outflow of thyroid secretion, exerts directly its temporary beneficial influence, or whether it is merely one of the hygienic factors which always go together to influence a patient whom we put to bed in a hospital, and whom we then, after a ligation, send forth to live a highly circumscribed existence. Certainly such sufferers do well after ligation, but in my earlier experience I failed to locate one set of superior thyroid vessels in a few instances, and these patients astonished me by doing just as well as the ones on whom there was no technical flaw. Perhaps these ligated individuals would do just about as well if we scratched the skin of the neck and then carried out all the other attendant measures for three or four months.

Removal or destruction of thyroid tissue is what does permanent, unmistakable, definite and very prompt good, where the disease has been correctly diagnosed and when the patient has not suffered the ultimate of post-thyroid damage.

When attacking the gland directly it is desirable to do what I have termed a subtotal thyroidectomy, removing the greater part of both lobes at the same time. Not every patient can endure this, however, hence it is my own custom to go just as far as possible toward this ideal in every operation, although I must admit that signs of impending danger have compelled me to cease abruptly at every thinkable stage of the procedure. Usually I manage without much difficulty to get out most of one lobe, but have had to satisfy myself with less than this and

hurriedly return patients to bed with clamps, gauze or rubber in place.

No small number of my patients have necessitated four different procedures, two ligations and two half removals of the thyroid, before a definite maximum of improvement, clinically a cure, was accomplished. An adult seems to get along reasonably well with a very small fraction of healthy gland tissue remaining behind. Of course, the quality of tissue left is no doubt a factor in any decision as to the amount that should remain, but I may say in this connection that I have never seen in all my experience an outspoken case of myxedema, although a rather noticeable percentage of my older patients have grown stout and present some very slight indications in this direction. Not one of them has shown deficiency symptoms serious enough to make her demand treatment for them, and their condition is so incomparably better than it was in the hyperthyroid state that I am inclined to disregard this as a practical consideration in estimating the amount that should be left behind.

I am very sure that none of the patients on whom I removed *one half* of the thyroid are more than 50 or 75 per cent. well. Some of them think themselves well, as far as their practical usefulness is concerned, and will for this reason not submit to the removal of the other half, but I assure you that they do not contrast at all with the individuals who have had practically the entire thyroid removed.

My patients who died in the hospital, to whom earlier reference was made in this article, did so for the following reasons: ether and gas have been the direct causes of death on the operating table in four instances. One utterly uncontrollable patient, in her struggles after the operation, had a ligature slip off the superior thyroid artery, and bled sufficiently into the tissues of the neck to compress a softened trachea to the extent of suffocation. One in the earlier days of inexperience lost enough blood on the operating table to succumb soon after getting to bed. Two died of a rapidly increasing hyperthyroidism within thirty-six hours after the operation, while trachea and esophagus were injured in another. I was unable in the two remaining thyroidectomies to tell just what the definite cause of death was.

I know something about most of the other approximately 300 patients, and can say definitely that all but the very few in whom the diagnosis was obviously incorrect, have been improved to an extent commensurate with the amount of thyroid removed, provided they have lived rationally. A great many of them are in about as good health as the average individual of the same age, and by far the greater majority of them are leading wholly useful lives and engaged to the full in their former occupations.

A study of this matter convinces me that future results can be improved: (1) if I can get the patient earlier; (2) by more prolonged hospital preparation based on a study of the metabolic rate; (3) by breaking off the operation whenever indications make it seem necessary, as I have done only in recent years; (4) by rejecting certain obviously hopeless patients with incurable post-thyroid damage, and (5) by the universal employment of *local conduction anesthesia*. I do not think of my results as settling a question; I am merely studying this problem intensively and present this summary of my experience to date for the purpose of aiding others in the same pursuit, as well as to profit by their experiences in return.

STUDY OF END-RESULTS BY DR. S. F.  
WENNERMAN

In order that we might be able to come to some logical conclusions as to the value of the various operative therapeutic measures described in the foregoing remarks, it was thought best to reexamine a series of patients at varying postoperative intervals. For this purpose only those who had been most seriously ill were asked to report. The postoperative interval varied from two months to twelve years, so that we are able to form some conclusions as to the relative time needed to gain certain ends in these cases.

The examination was divided into two parts: first, subjective symptoms, and second, objective findings. Under subjective symptoms, all the patients' complaints were taken independently of the former records and then checked with the symptoms as noted in that part of the former record, known as the goiter chart.

We were ultra-conservative in our grading of the patient's symptoms, and if there was any question as to a patient's improvement we regarded the symptom as being present.

We shall now take up somewhat in detail a discussion of the results by reviewing the subjective symptoms:

*Nervousness.* — Before operation this symptom was present in varying degrees in all of the patients examined. After operation, we found this the most persistent symptom of the group. Since most of the patients operated on were women, and since a great many women are nervous, even when not suffering from goiters, it is very difficult to determine just how much of the patient's nervousness is due to the goiter, and similarly how much of the remaining nervousness is extra thyroid. However, in this series examined at varying intervals after operation, only 50 per cent. of the cases complained of being nervous. Of this number not one had been operated longer than one year ago. The longer the postoperative interval the fewer the number of patients that complained of this

symptom. Another factor which bears an important rôle in increasing the percentage of patients having nervousness, is that this series includes not only those which we consider as having had the ideal operation, namely, a bilateral lobectomy, but also includes those that have had a ligation or some other form of partial operation. One must also not lose sight of the fact that some of these patients through necessity, ignorance or carelessness, have not followed out carefully the instructions with regard to rest, diet and the proper mode of living in general.

*Tremor.*—This symptom ranks second in importance because aside from nervousness, it is the most frequent evidence of hyperactivity of the thyroid gland. It was present in 40 per cent. of our cases. Here, again, as in a general way with nervousness, the longer the postoperative period the fewer cases having tremors. There was one exception in the case of Mr. M., operated five years ago. In this instance there was present a very definite tremor, but this patient had only one lobe of his thyroid removed and is to reenter the hospital shortly for the removal of the opposite lobe. There were no cases that demonstrated a disappearance of the tremor in less than one year from the operation.

*Dyspnea.*—This symptom is one of extreme interest. It is the key to the patient's cardiovascular condition and bears out some interesting facts concerning the so-called goiter heart and postthyroid heart. We have believed, in common with most men, that the hearts of goiter patients presented for a long time certain functional changes, but if the state of toxicity persists for too long a period of time the changes are no longer functional, but become organic, and then we have to deal with a true myocarditis. In view of some of our recent findings we are not so sure of these affections as we formerly were. We have seen cases in which there was present all the signs of myocarditis, presumably of organic nature. These patients had had partial thyroid operations. We were greatly surprised to find after removing what little thyroid there was left, that these hearts come back in a surprising short time to almost within normal limits. In our series 33.3 per cent. of the cases complained of dyspnea at the time of reexamination, although this symptom was present mainly in the recently operated cases. There were two cases who complained of dyspnea and who had been operated more than one year ago. Our explanation of this is that probably there had been some permanent damage to the cardiovascular system in these cases before operation. However, a careful examination of the hearts in these patients failed to reveal any abnormalities, and there was an unusual gain of weight in both patients, one gaining 25 pounds, the other 46; this latter fact may possibly explain the dyspnea.



*Palpitation.*—The next two symptoms will be discussed together, as it is very hard to elicit from a patient the difference between palpitation and tachycardia, and since they are so easily confused. These two symptoms were present in 26 per cent. of the cases; in only one, however, who had been operated more than a year ago. Palpitation and tachycardia were the only symptoms complained of by this patient, and when examined during one of the cardiac attacks a diagnosis was made of idiopathic paroxysmal tachycardia, which is probably of extrathyroid origin.

The next symptom complex is the one dealing with the gastro-intestinal tract, and is manifested by vomiting and diarrhea. This was a comparatively rare condition, only being complained of in one of the cases. Since it was so rare we shall not devote further time to the discussion of it.

*Insomnia.*—A very common symptom in toxic goiters, and it is very interesting to note that in a group of cases only 6 per cent. had this symptom following thyroidectomy. These were all recently operated cases. One might also draw the conclusion that it is one of the first symptoms to disappear after thyroidectomy.

*Excessive sweating* was complained of in 6 per cent. of our cases and these were individuals who had either just been operated or on whom only partial operations were done.

*Prominence of eyes.*—This was complained of in 16 per cent. of the cases and the statement made with regard to sweating can easily be applied here to the patients with this symptom, since all in this class had either just been operated or had only had partial operations done. A very striking thing is to watch during his postoperative course an individual with marked exophthalmos. In those cases who have had a complete subtotal thyroidectomy the eyes seem to recede almost overnight. This is one of the very striking and evident benefits of a total operation.

*Edema.*—In not one of our cases was this symptom complained of postoperatively. We have, however, seen this in varying degrees in a considerable number of our toxic goiters with cardiac involvement before operation.

Another purely subjective symptom which is of interest is to question the patient with regard to general strength. There was a marked improvement in all of the cases, even the very recently operated ones in this respect, and only 12 per cent., even after exhaustive questioning about their ability to do their usual kind of work, felt that the general strength had not completely returned. Here again we found that this symptom was present only in the recently operated cases.

*Headache* was complained of in 16 per cent. of the cases, but this symptom can be the result

of so many other processes in the body that a positive complaint of headache is of relatively little value. We do feel that the negative findings or absence of headache is probably significant.

From the foregoing symptoms an attempt was made by the observer to place the patients in either one of two groups, viz., those having thyroidism and those without it. It goes without saying that the group into which some of the border line cases may have been placed depended largely on the individual observer, but in this series we have tried to err on the side of placing too many rather than too few in the thyroidism group.

A patient was considered as having thyroidism if presenting not all the classical symptoms of Graves' disease, but if the observer felt that he could safely make a diagnosis of hyperthyroidism. In some of the cases perhaps only one or two of the symptoms would be present, and these not to any marked extent. Those who were placed in the nonthyroidism group were cases without any evidences of hyperthyroidism.

With this criteria in mind we found that 37 per cent. of the cases still showed some slight evidences of thyroid toxicity. However, only a small percentage of this group considered themselves at all sick.

We shall now turn from a consideration of the subjective symptoms to a consideration of the objective. Here of course we no longer relied on the patients' statements but made our observations from a physical examination of the patients. We therefore consider this phase of the subject entirely free of any psychical element.

Examination of the eyes from the standpoint of eliciting the classical signs of Stellwag, Von Graefe, Moebius, et al., gave positive findings in 6 per cent. of the cases. These were only patients on whom partial operations were done.

Exophthalmos was present in 16 per cent., but here again we found the usual story, the ones with positive findings had either partial operations or the postoperative interval had not been long enough. In not one of the cases was there evidences of pressure or paralysis of the vocal cords. This of course is a very interesting side light on the operative technic used in these cases. None of our cases showed any of the skin phenomena so characteristic of toxic goiters.

The thing which concerns us most in hyperthyroidism is the condition of the heart. It is the one organ affected so early and from it arises most of the serious symptoms of this disease. With this in mind every patient examined in this series was considered very carefully from a standpoint of the cardiovascular apparatus and as a result of this work we have found some exceedingly interesting things. The

hearts were examined first, with reference to size, in order to determine the presence of any dilation and hypertrophy. 2. With reference to the sounds to determine the presence of any abnormality in the character of the sounds and to detect any murmurs. 3. The rate of the heart under various conditions, such as when lying quietly, when standing, or after exertion. 4. With regard to the rhythm. 5. With regard to the blood pressure, and lastly with regard to evidences of cardiac decompensation, such as stasis in the lungs, liver, kidneys and extremities.

In none of our cases who had had what we considered a complete operation was there any enlargement of the heart. In 12 per cent. of the cases where only a partial operation had been done, there was present some slight enlargement with cardiac murmurs.

In order to determine the effect of operation on the pulse rate, it was thought best simply to add together the collective rates of all the patients in the series and then divide this total by the number of patients. This gave us the average pulse rate in the series. This average is undoubtedly high because these patients were under some considerable nervous strain during the examination, but it has some value in a relative way because the pre-operative pulse rates were obtained under comparatively similar circumstances. We then averaged the pre-operative rates in a like manner. The average rate before operation per patient was 111, and the average rate after operation was 91 (this included patients in various stages of their convalescence). By subtracting the last named figure from the pre-operative rate we find it leaves 20; in other words, the average drop pulse rate after operation of the patients examined in this series is 20 beats per minute.

A very frequent occurrence in toxic goiters before operation is an irregularity of the rhythm, due to extra ventricular systoles. The irregularity of the rhythm varies from this to that of an absolutely irregular heart. We very frequently observed following thyroidectomy that hearts with a considerable number of extra systoles became intirely regular and to all intents and purposes were normal again. It has been our observation in a few cases at any rate that hearts pounding away at a rate of 140, with a pulse deficit of perhaps 50 or 60 beats (this being the difference in the heart rate as counted over the pericardium and at the radial in the wrist), in whom we had tried all forms of cardiac therapeusis, including prolonged rest, dieting, digitalis, ice bags, etc., with no avail, that the removal of a comparatively insignificant looking goiter, or single lobe left behind at a previous operation, was followed by an almost immediate slowing of the rate to perhaps 90, with all the beats coming through to the wrist and some semblance to a cardiac regularity.

We therefore feel very strongly that a bad heart in a patient suffering from a toxic goiter is not a contraindication to an operation, but on the other hand, is a more imperative indication that some of the thyroid tissue must be removed. This problem has been made very much easier for us since we have developed our technic and taken out these goiters under conduction anesthesia, because the shock attending a thyroidectomy performed in this manner is almost negligible, and any heart which can be tided over its stage of decompensation can withstand the very slight load thrown on it by removal of the thyroid tissue under conduction anesthesia.

The blood pressure was determined in a very similar way to that of averaging the pulse. The pre-operative pulse pressure (difference between systolic and diastolic pressure) was averaged for all the cases, and similarly the postoperative pulse pressure was determined. We found the pre-operative pulse pressure averaged 50 mm. of mercury; a difference of 10 mm. was observed postoperatively in this group of cases. We made these observations because of the well known fact that in hyperthyroidism the pulse pressure is usually very much increased.

The average weight gained per patient was 18 pounds.

A summary of the subjective symptoms and objective findings was then made independently. The patient was questioned to determine what he considered his percentage of disability to be; in other words, how much of the work of a normal individual could he not do. These percentages were averaged and found to be 16 per cent. The observer's estimate of the percentages of improvement was then recorded and averaged, and found to be 17 per cent. This was, of course, in all types of patients.

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#### THE PREVENTION OF COMPLICATIONS IN PREGNANCY AND LABOR\*

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De Lee<sup>1</sup> in America and Ingerslev<sup>2</sup> in Denmark rank childbirth next to tuberculosis as a cause of death among women between the ages of 15 and 44 years; and Bumm<sup>3</sup> agrees with the former's assertion that for every death occurring in connection with childbirth about five times as many women who do not die are con-

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1. De Lee, Joseph B.: *J. A. M. A.*, p. 1126 (Oct. 14) 1916; *Am. J. Obst.*, p. 15 (July) 1917.

2. Ingerslev, E.: *Die Sterblichkeit an Wochenbettfieber in Dänemark und die Bedeutung der Antiseptik für dasselbe*, *Ztschr. f. Geb. u. Gynec.*, 26: 443, 1893.

3. Bumm, E.: *Grundriss zum Studium der Geburtshilfe*, Neunte Auflage, 1913.



demned to a life of more or less chronic invalidism. What man practicing medicine has not heard the depressing statement, "I have not felt well since my baby came." Is such a condition the result of errors of omission or of commission on the part of the attending physician or nurse? The too frequent habit of looking on every case of pregnancy as "the most natural process in the world" until confronted with alarming symptoms of toxemia or hemorrhage, or until a protracted labor and unsuccessful attempts at delivery reveal a contracted pelvis, is partially responsible, as well as the idea that a woman in labor is immune to infection; while lack of knowledge or training on the part of the patient as well as physician as to such dangers, are all factors which interfere materially with satisfactory prenatal care. Many women place themselves under the care of a physician only when near full term or alarming symptoms supervene; and for this reason it is advisable to educate the public as to the necessity of early prenatal care in localities where such education is needed. Much can be done to reduce the percentage of sufferers from poor midwifery and it behooves the obstetrician to avail himself of all possible means for so doing.

Proper obstetrical care should comprise adequate prenatal care with a reasonably comfortable pregnancy; a safe delivery and a puerperium which shall return the recently delivered woman to a state of health as good and sometimes better than before the onset of her pregnancy. Lack of cooperation on the part of the patient and family, either knowingly or because of their inability to do otherwise, sometimes interferes with this much desired result, and occasionally it may be the part of wisdom for the accoucheur to refuse to care for such patients as are not amenable to his control. The pregnant woman, as soon as she is aware of her condition, should place herself under the care of her physician; the earlier the better. The physician should take a complete history and make a thorough physical examination, also a determination of the patient's weight, blood pressure, and examination of the urine at the time of this first consultation. Any general or constitutional ailments detected at this examination should receive appropriate treatment. In this latter connection might be mentioned the advisability of putting in order, in a painless manner, all bad teeth; looking after any nasal sinusitis present; while abnormal urinary findings, or high blood pressure may call for special instructions as to diet, rest, proper eliminative measures, etc.; and the discovery of tuberculosis or severe cardiac involvement may call for the consideration of an interruption of the pregnancy. The history of previous abortions or stillbirths requires the exclusion of syphilis and nephritis. E. P. Davis<sup>4</sup> states that spirochetes are present in

60 per cent. of all macerated fetuses; this I believe to be a very conservative estimate. My own investigations<sup>5</sup> as to the causes of abortion showed that a positive Wassermann reaction was obtainable in about 25 per cent. of all women in my series who had aborted, while less than one-third of the syphilitic women gave any history or showed any physical signs indicative of the disease. A routine Wassermann reaction is desirable, and the therapeutic test has often resulted in full term delivery of women subject to habitual abortion. No obstetrical examination is complete without: 1. A complete physical examination. 2. Taking the blood pressure. 3. Examination of the urine, which besides the routine examinations for albumen and sugar, must include some knowledge of the twenty-four hour output and a microscopic examination to reveal the presence of casts, pus and bacteria. 4. Palpation of the pelvic cavity to ascertain any abnormalities of the uterus, adnexa, pelvic floor and bony pelvis. 5. Measurements of the bony pelvis. 6. Blood for a Wassermann test in patients with a history of previous abortion.

With this information in hand early in pregnancy, we have a working basis from which to proceed.

The subject of the prevention of complications is so broad that it is possible in this article to discuss briefly only its more important phases. I shall undertake to classify the complications of pregnancy under two headings; namely, those occurring during the first half of pregnancy and those most common in the latter half. Among the complications of the first half of gestation are, abortion, retrodisplacement of the uterus, nausea and vomiting; while those of the latter half discussed in this paper comprise toxemia, contracted pelvis, conditions that may influence breast or perineal complications, as well as cervical injuries.

Abortion may be caused by extragenital factors, as overexertion, syphilis, heart and kidney abnormalities, etc., though local lesions involving the genitalia, particularly the endometrium, occupy first place in the etiology of abortion. The first three months of gestation being the period when most abortions occur, all possible causes should be sought early and corrected where possible; physical exertion should be restricted and when there is any tendency toward active uterine contractions or bleeding, absolute rest in bed and the strict prohibition of coitus are indicated. It has been my custom to give full doses of opium to such patients until all active bleeding and pain cease. In the event of abortion becoming inevitable, it is important to see that the uterus is completely emptied and kept well contracted, with especial care to avoid infection and consequent subinvolution which

4. Davis, E. P.: *Tr. Am. Gynec. Soc.*, 1916.

5. Royston, G. D.: *A Statistical Study of the Causes of Abortion*, *Am. J. Obst.*, 76, No. 4.

predispose to abortion in future pregnancies. I think that suspected infection in patients with incomplete abortion calls for very careful discrimination; never a sharp curet, but perhaps a blunt curet or the examining finger may be used to detach retained or adherent fragments which can then be washed out of the uterus by means of an intra-uterine irrigation of 1,000 c.c. of 50 per cent. alcohol, or 1:5,000 permanganate of potash solution at a temperature of 50° C. under very low pressure. An ice cap constantly over the lower abdomen and full doses of ergot are then indicated, while the patient is kept in bed for ten days and advised along the same lines as after any other labor.

Retrodisplacement of the pregnant uterus is fairly common and usually corrects itself spontaneously; other cases escape notice until symptoms of abortion or pelvic pressure from incarceration result. The displacement may be corrected by means of the knee-chest posture for three to five minutes while practicing deep breathing exercises which favor the entrance of air into the vagina. Obstinate cases usually yield readily to gentle pressure in the vaginal fornix by means of a rubber bag containing 5 pounds of mercury with the patient in the Trendelenburg position for five to twenty minutes. This mercury bag method is the safest and one of the most effective of all measures for replacing the retrodisplaced pregnant uterus.

If there is distress from nausea and vomiting, is it due to a neurotic, reflex or a toxemic cause? Correction of constipation is important in all cases; rest, often in bed or even isolated in an institution; eating five or six small meals daily, instead of three larger ones, with a minimum of heavy indigestible articles of diet; sedatives, antacids and plenty of fluids, will usually relieve the first named variety. Replacement of the retrodisplaced pregnant uterus, perhaps the removal of a pelvic tumor, may be necessary in the second variety. Injections of soluble extract of corpus luteum, as recommended by Hirst,<sup>6</sup> have given great relief to most of my patients with symptoms quite resistant to the other methods of treatment mentioned. Garnette<sup>7</sup> reports the cure of two patients with pernicious vomiting by means of blood transfusion, using 200 to 250 c.c. of blood from a recently delivered woman. Termination of pregnancy in cases of true pernicious vomiting is advised by Bumm,<sup>3</sup> Schwarz,<sup>8</sup> Williams,<sup>9</sup> and others as soon as the diagnosis is made. Acidosis must be excluded and a disturbed nitrogen partition with a high ammonia co-efficient is important.

The indications for therapeutic abortion are not easy to determine. Since two-thirds of all

pregnant women suffer to some extent from nausea and vomiting, a correct diagnosis of the pernicious form is important. P. Jung<sup>10</sup> states that the steady, constant, marked loss of weight is the important indication, but it must be accurately determined. He advises weighing the patient every third day on the same scale, preferably in the same clothes following defecation after breakfast; an accurate knowledge of the intake and output including the vomitus, must be had. As indications for abortion, he mentions the continued rapid loss in weight; declining blood pressure and increasing pulse rate; appearance of acetone in the urine, with other abnormal urinary findings, febrile temperature, prostration, jaundice, etc. Hofbauer<sup>11</sup> gives glycosuria after the ingestion of 2 ounces of levulose, as an indication, while Devraigne<sup>12</sup> emphasizes the importance of a concentrated state of the blood as shown by the marked increase of both red and white cell counts. Pinard<sup>13</sup> interferes when the pulse rate remains constantly above 100, while Fieux<sup>14</sup> holds that the presence of polyneuritis with icterus and the appearance of bile pigment in the urine calls for an interruption of that pregnancy. Williams<sup>9</sup> has told us of the value of the high ammonia co-efficient, which, however, may also be due to acidosis, the result of starvation. Extragenital conditions, as carcinoma of the stomach, must be excluded. The general picture of the case should be considered and the patient treated expectantly until a definite diagnosis is made and in the event that blood transfusion from a recently delivered (not more than ten days postpartum) woman fails to give marked improvement, therapeutic abortion will save the life of every woman so affected if done sufficiently early. Bumm<sup>3</sup> states that albumen may be found in the urine at some time during gestation in 15 per cent. of all pregnant women; that 5 per cent. show albuminuria constantly throughout pregnancy; and 1 per cent. show marked albuminuria and cause trouble. Only by routine systematic examinations is it possible to recognize renal involvements early enough to avoid most of these severe conditions. Nephritic toxemia can seldom be positively differentiated from preeclamptic toxemia unless the previous history and later course of the disease are known. Nephritic toxemia occurs most often in multiparous women while about 80 per cent. of the cases of eclampsia occur in primipara. Williams reminds us that, next to syphilis, chronic nephritis is the most common cause of spontaneous premature labor. The prevention of eclampsia and

10. Jung, P.: *Behandlung des sogenannten unstillbaren Erbrechens in der Schwangerschaft*, Deutsch. med. Wchnschr., p. 61 (Jan. 20) 1916.

11. Hofbauer, J.: *Beiträge zur Aetologie und zur Klinik der Graviditätstoxikosen*, Ztschr. f. Geb. u. Gyn. 61, H. 2, S. 200.

12. Devraigne: *Obstetrique* (May) 1909.

13. Pinard: *Des vomissements de la gestation*, Ann. de gynec. et d'obst. N. S. 6, 385-399, 1909.

14. Fieux: *Complete Report of Meeting of French Obstetricians*, Ann. de gynec., Toulouse (Dec.) 1910.

6. Hirst, J. C.: *The Control of Nausea and Vomiting of Pregnancy by Intramuscular Injections of Corpus Luteum Extract*, J. A. M. A., p. 1848 (Dec. 16) 1916.

7. Garnette, A. Y. P.: *Am. J. Obst.*, 76, No. 2.

8. Schwarz, H.: *Personal Communication*.

9. Williams, J. W.: *Obstetrics*, Third Edition, 1912.



nephritic toxemia being the same, both will be considered together. Asa B. Davis<sup>15</sup> emphasizes the well known fact of how few women in private practice under the care of skilled obstetricians develop eclampsia, and makes the statement that "the time to treat eclampsia is before it occurs." Winston<sup>16</sup> and Irving,<sup>17</sup> among others, consider eclampsia a preventable disease in practically every case, and in his excellent report Condit<sup>18</sup> considers blood pressure observations to be the first warning of impending danger, while persistent hypertension is looked on as an absolute signal for terminating pregnancy if convulsions or coma are to be avoided. A blood pressure above 130 systolic and below 150 is an indication for more rest, more active elimination, more fluids, and a restricted nonprotein diet; a systolic pressure of 150 or more calls for absolute bed rest, a stricter dietetic régime, daily determinations of the urine and blood pressure and where the latter is climbing still higher, the induction of labor might be considered in some cases. Irving<sup>17</sup> attaches more significance to high blood pressure in young individuals than in those over 30 years of age. My own observations have shown blood pressure to be a more reliable indicator than the presence of albumen or casts, though a diminished twenty-four-hour urinary output has preceded the convulsion in every one of my cases and Bumm gives the best prognostic sign in eclampsia as an increased excretion of pale urine. Every patient must be studied and the treatment individualized. The general picture of the case must be considered and the patient treated expectantly until a definite conclusion is reached. The two most important signs of impending danger of convulsions or coma are a diminished twenty-four-hour output of urine of abnormal character, and a high blood pressure, particularly when the latter is on the increase. Close watching will almost invariably reveal the impending danger, which is usually averted by bed rest, restricted diet of low protein content, and increased elimination through all the excretory passages, e. g., through the kidneys by forcing water; the bowels, by daily saline purges or colonic flushings, preferably with a solution of bicarbonate of soda; skin, by daily warm baths or hot packs and sleeping between blankets to promote sweating; through the lungs by having plenty of ventilation in the room. Every patient will recover if delivered early enough; and next to delivery venesection, withdrawing 500 or as much as 1,000 c.c. of blood in severe cases, is the most effective means of treatment though this may be an injurious fac-

tor in interfering with the oxygenation of the fetal blood. Since peripheral necrosis of the liver constitutes the chief characteristic lesion in eclampsia and Opie and Alford<sup>19</sup> and Whipple and Sperry<sup>20</sup> have produced central necrosis of the liver lobule experimentally with chloroform, this anesthetic is strictly contraindicated in all forms of toxemia of pregnancy, ether being the anesthetic of choice. The prevention of eclampsia is far easier than the cure, and intelligent prenatal care requires accurate knowledge of both blood pressure and urine every two weeks throughout pregnancy, particularly during the latter half of gestation. The frequency of pyelitis during pregnancy is not surprising when we consider that Murray<sup>21</sup> found colon bacilli in the urine in 44.5 per cent. of gynecologic cases before and in 93 per cent. after operation, and Weibel<sup>22</sup> found only 25 per cent. of his patients with sterile urine. The diagnosis of pyelitis during pregnancy is usually overlooked, though Mayer<sup>23</sup> states that pregnancy is interrupted prematurely in one-third of the cases complicated by pyelitis. Most of these cases yield readily to bed rest, forcing fluids, suitable diet, large doses of urotropin and colonic flushings twice daily. More severe types may require ureteral catheterization and irrigation of the kidney pelvis, which, however, may excite uterine contractions.

A fairly common and at times very distressing condition, expressed by pains in the back, thighs and legs, is due to weak feet. Grassman<sup>24</sup> tells us that of 700 patients with weak feet there were 400 women in whom the pain was referable not to the feet at all, but only to the thighs. These feet showed eversion of the heels and heel cords and lower arches, or even pronounced flat feet. Swelling at the outer side of the ankle and muscular spasm and rigidity are found in advanced cases. It is important to remember that the symptoms do not correspond to the amount or degree of deformity present. The treatment consists of the use of the proper footwear, tiptoe exercises, and attention by the orthopedist.

Rudolph Holmes,<sup>25</sup> among others, teaches that once a cesarean section, always a probable repetition of the operation in subsequent pregnancies. My personal belief is that it is a dangerous

19. Opie, E. L., and Alford, L. B.: Diet and the Hepatic Lesions of Chloroform, Phosphorus and Alcohol, *J. Exper. M.*, 21: 1-20, 1915; Opie, E. L.: Zonal Necroses of the Liver, *J. M. Res.*, 12: 147-167, 1904.

20. Whipple and Sperry: Chloroform Poisoning, Etc., *Johns Hopkins Hosp. Bull.*, 20: 278-289, 1909.

21. Murray, Williams and Wallace: Incidence, Characters and Significance of Bacillus Coli in Urine, *J. Obst. & Gynec., Brit. Emp.*, p. 405 (Dec.) 1910.

22. Weibel, W.: Serologisches und Klinisches über Schwangerschaftspyelitis, *Centralbl. f. Gyn.*, p. 414, 1914.

23. Mayer, A.: Die Beziehungen der Koli Pyelitis zur Fortpflanzungstätigkeit, *München. med. Wchnschr.*, S. 149 (July 8) 1913.

24. Grassman, J.: A Plea for the Prevention and the Treatment of Weak Feet Occurring During Pregnancy and the Puerperium, *Med. Rec.* (Dec. 16) 1916.

25. Holmes, R.: Obstetrics, A Lost Art: A Criticism of the Various Indications for Cesarean Section, *Surg., Gynec. & Obst.* (Nov.) 1915.

15. Davis, Asa B.: *Am. J. Obst.*, 77: 62, No. 1 (Jan.) 1918.  
16. Winston, J. W.: Eclampsia: A Preventable Disease, *Med. Rec.*, p. 414 (Sept. 2) 1916.

17. Irving: Systolic Blood Pressure in Pregnancy; Observation on 5,000 Consecutive Cases in Boston Lying-In Hospital, *J. A. M. A.*, 66: 935 (March 25) 1916.

18. Condit: Prophylaxis in Eclampsia, *Illinois M. J.*, (Dec.) 1917.

risk to allow the test of labor in a patient who has had a febrile postoperative course following a previous cesarean section, owing to the great doubt of the condition of the uterine scar when subjected to the strain of labor. Since no operator can know in advance whether his cesarean section will be followed by an afebrile course, this operation should not be undertaken too lightly for acute or temporary conditions which might be dealt with through the vaginal route without additional risk. The one indication for cesarean section agreed on by all writers is contracted pelvis, with which may be included pelvic tumors obstructing the birth canal. Pelvic contraction is easily recognized when measuring the pelvis at the time of the first consultation. In view of the fact that most obstructions to the advance of the presenting part occur at the pelvic inlet, the shortened anteroposterior diameter of the inlet is the most important measurement of the pelvic cavity. Where a pelvimeter is not available during the examination, a fairly satisfactory estimate of this diameter may be obtained by palpation of the sacral promontory. If the index or middle finger of the examining hand reaches the center of the promontory easily, or can palpate more than the lower three sacral vertebrae, or can palpate the entire linea terminales, that particular pelvic cavity is small. Where the bony pelvis, though small, permits the entrance of the presenting part past the pelvic inlet, watchful waiting is probably the best policy though it is usually not advisable to permit pregnancy to continue beyond the customary 280 days.

The induction of labor calls for the strictest asepsis, preferably in a hospital, and is usually not advisable earlier than the thirty-sixth week of gestation. Patients with a true conjugate of 9 to 10 cm. in simple flat and generally contracted pelvis, form the chief indications for this procedure. A true conjugate measurement of 7.5 cm. or less is an indication for cesarean section, which should be done as soon after the onset of labor as possible. Vaginal examinations are contraindicated before this operation; any internal palpation at this time should be through the rectal route.

J. O. Polak and G. W. Phelan,<sup>26</sup> speaking of the management of labor in borderline contractions of the pelvis, state that the most important single factor in the conduct of these labors is obstetrical asepsis. They emphasize the following seven important points: 1. Accurate pelvimetry. 2. Pelvimetry without the relative estimation of the size of the fetus is of little value and the most important fetal estimation is that obtained through the test of labor. 3. All borderline cases should be given the test of labor in a hospital under the most scrupulous asepsis. 4. All examinations to be made per rectum until a final decision as to procedure is

called for; only then is a vaginal examination permissible, and that under narcosis and the strictest asepsis. 5. Eighty per cent. of such borderline cases will deliver spontaneously if so treated. 6. Pubiotomy is recommended in multipara with simple flat pelvis where the conjugata vera measures 7.5 cm. or more, and in a generally contracted pelvis with the conjugata vera 8.5 cm. or over, and in funnel shape pelvis in primipara; they prefer Doederlein's technic for this operation. 7. Every case should be individualized; classical section for elective cases; extraperitoneal section for prolonged labors and where the membranes have been ruptured for a long time.

My personal viewpoint is that pubiotomy is a dangerous operation in primiparous women because of the extensive injuries to the soft parts. I also believe that the subcutaneous pubiotomy of Bumm is superior to Doederlein's operation for the same reason that any simple fracture is preferable to a compound wound and any operator who is not skilful enough to perform the first is not a safe man to attempt the other. Contracted pelvis is a strict contraindication to the use of pituitary preparations before delivery, owing to the danger of rupturing the uterus. These preparations should be reserved for the second stage of labor after the presenting part has already entered the pelvic cavity and no serious obstruction confronts the advance of the child. Only small doses of pituitary preparations (not to exceed 2 to 5 minims) should be given to any patient during the first stage of labor. A preliminary visit and examination four to six weeks before the date of expected delivery should be made in all cases and any abnormal position of the child corrected before the patient goes into labor. After delivery, aside from after-pains and minor disturbances of urination and of lactation, the patient should have an uneventful convalescence. Two dangers beset her, infection of the genitalia and infection of the breasts. A. Soramis<sup>27</sup> of Ephesus, in A. D. 100, advised against pumping the breasts because it increases their activity; yet more sore breasts are tortured today by pumping and massage than escape such misdirected efforts. Massage and pumping are both strictly contraindicated if there is the slightest suspicion of inflammation of the breasts. Over half of the nursing mothers suffer to some extent from sore nipples, primipara more than multipara. Sore nipples may be caused by erosions, blisters and ulcerations. Preparation of the nipples from the twenty-eighth week of gestation is advisable; cleansing with soap and water, then with alcohol, followed by some opening ointment, as 50 per cent. lanolin and cold cream, twice daily is usually sufficient; inverted nipples should be drawn out with a breast pump or

26. Polak, J. O., and Phelan, G. W.: Management of Labor in Borderline Contractions of Pelvis, *Am. J. Surg.* (Nov.) 1916.

27. Soramis, A.: Quoted by De Lee, *Principles and Practice of Obstetrics*, Second Edit., W. B. Saunders & Co., p. 906, 1916.



nipple former at frequent intervals, while the use of the nipple shield is strongly urged on all cracked nipples during nursing periods. The constant local application of an ice cap alone has aborted many cases of beginning mastitis.

That every injury occurring as a result of labor, demands immediate repair is of course evident. The raw surfaces heal better after immediate repair and the approximated edges are less apt to invite infection; yet many primary repairs do not heal. The report of Plass<sup>28</sup> from the Johns Hopkins Hospital shows that the use of too much antiseptics gave from two to five times as many poor unions as where simple cleanliness was used, and thus may interfere with healing; also that more simple asepsis than antiseptics is needed. This latter fact has been recognized by me for years and since the teaching of Oscar Frankl,<sup>29</sup> that moist heat causes cells of impaired vitality and lowered resistance (e. g., cells of regeneration and repair) to disintegrate, and since most antiseptic pitcher douches as well as any vaginal douches ordered, are usually warm, the degree of heat might be a harmful factor, hence no pitcher nor vaginal douches nor vulval cleansings should be used with anything beyond normal saline or sterile water, and that given at a temperature no higher than body temperature.

Cervical injuries requiring repair are usually due to meddlesome interference before the cervix is completely dilated. Manual dilatation and the use of forceps before the cervix is completely dilated, are both bad practices. In breech presentations, the safest thing for both mother and child is, to do absolutely nothing until the breech distends the vulval ring, then place the patient on a solid table with the hips well over the edge; 1 c.c. of some pituitary preparation may be injected at this time, a deep medio-lateral episiotomy made, and a reliable attendant or assistant makes continuous pressure on the fundus to prevent extension of the aftercoming head. This usually insures a rapid, safe delivery and the avoidance of more extensive perineal injury. Active hemorrhage from a well contracted uterine body usually denotes injury and calls for investigation with necessary repairs. In repairs of the cervix or perineum, the fewer the number of sutures sufficient to approximate the wound edges the better. Plain No. 1 or No. 2 catgut sutures introduced about 1 cm. apart and 1 cm. from the torn margin and tied separately, have given the best results in my hands. An ice cap wrapped in a sterile towel and applied directly against the perineal wound gives considerable relief to the pain; marked edema or suppuration along one suture calls for the removal of the offending suture, without impairment of the integrity of the repair. Broken down repairs granulate very satis-

factorily when kept bathed in a solution of 25 per cent. turpentine in olive oil.

More women die from accidents of the third stage of labor than from the other two combined. Polak's work<sup>30</sup> on some 1,300 cases showed that the only intrauterine placenta that causes hemorrhage is the partially detached placenta, and this partially detached placenta is most often caused by meddlesome interference preventing a normal mechanism of self detachment. Polak advises strict asepsis; placing a clamp on the cord close to the vulva, and doing nothing until the lengthened cord shows that spontaneous detachment has occurred; only then to express the placenta. The longer third stage permits of a more normal mechanism of placental detachment and the expression of the clots from the uterine cavity acts as a very good prophylactic measure for the prevention or limitation of after-pains, often so distressing to the patient.

Before closing, just a word may be said about infection. The pathology of the puerperium is covered by the pathology of infection which Williams, De Lee, Bumm, and others, tell us shows little improvement since the discovery of asepsis and antiseptics, largely because these latter are less practiced in obstetrics in general than in other branches of surgical work. The use of rubber gloves in all examinations; substitution of rectal for vaginal palpation in certain cases; especial care to keep everything out of the parturient canal after delivery; a properly managed (not too short) placental stage; and the constant knowledge that what is in the birth canal does not kill the patient, but what is *carried* inward from without, will do much to lessen infection. Where the patient has been exposed to infection measures to keep the uterus well contracted are all-important so as to obliterate venous and lymphatic channels for carrying infection. The use of ergot preparations internally and the ice cap locally are of value for this purpose, though the prevention of infection is far more easily accomplished than the cure.

In conclusion, I wish to emphasize the importance of sufficient prenatal care to recognize abnormalities likely to cause trouble in connection with either pregnancy or labor; the routine watching of systematic elimination, blood pressure and urinalysis; avoidance of exertion to the extent of fatigue; the recognition of pelvic contraction before the onset of labor; the use of sterile rubber gloves in all cases; the immediate repair of all injuries; and bear in mind the saying that "If in doubt as to what to do, do not do anything"; very few complications will arise which cannot be coped with in a satisfactory manner.

Wall Building.

28. Plass, E. D.: Post-Partum Care of the Perineum, Bull. Johns Hopkins Hosp., 27: 107, 1916.

29. Frankl, Oscar: Personal Communication.

30. Polak, J. O.: The Management of the Placental Stage of Labor, Surg., Gynec. & Obst. (Nov.) 1915.

# THE JOURNAL

OF THE

## Missouri State Medical Association

MAY, 1920

### EDITORIALS

#### THE JEFFERSON CITY SESSION

The sixty-third annual meeting of the Association adjourned April 8, after one of the most interesting sessions it has ever held. From the scientific standpoint the papers were regarded as a distinct forward step in medical progress, the symposium on cancer being especially commended, while the collection of papers on children's diseases brought forth equally generous compliments and expressions for a repetition of such an arrangement of the scientific work. The papers on state medicine also aroused animated discussion and the number of papers on diseases of the eye, ear, nose and throat revived the interest of members in these specialties.

The early date of the meeting developed into a serious obstacle to the attendance as the weather in the western part of the state turned stormy, and added to this was the fact that the first day of the meeting occurred on the general election date so that the number in attendance was considerably below normal. Governor Gardner was heartily received and addressed the members for an hour on the problems that confront physicians as citizens, giving special mention to the questions pertaining to public health which are constantly before the officials, and expressing the general sentiment of the people in lauding the activities of the medical profession during the war. President Wood also drew attention to the problems that we shall find confronting us in protecting the public health and caring for the unfortunate sick and afflicted who may become wards of the state, while reminding us of the achievements already attained in the control of communicable diseases and the practical eradication of some contagions.

At our previous session in Jefferson City in 1918, some difficulty was encountered in darkening the House of Representatives and at that time the lantern slides were not projected satisfactorily; but at this session the hall was successfully darkened and our new streopticon, arranged so that the pictures on the screen dissolve gradually while the succeeding picture is being projected, proved highly satisfactory

in the exhibition of the slides. This lantern was recently purchased by the Association, thus avoiding the difficulty that has confronted us in the past when we had to depend on a member to furnish the lantern or hire one for temporary use.

In the House of Delegates the routine business of the organization was methodically and rapidly transacted. The absence of reports from some committees brought out adverse comment concerning their usefulness which provoked a motion to discontinue the inactive ones, but the motion was withdrawn with the understanding that it would be renewed next year if the same condition prevailed. From the reports of the officers it was shown that the condition of the Association was satisfactory as to the number of members, there being a larger enrollment than in any previous year. The number of paid up members was also up to normal.

The House disposed of the question of dues to the State Association of members who were in the service, and instructed the county societies that these members should pay their dues or, if the county societies desired to exempt them from local dues, the county societies must pay the state assessment.

The treasurer's report showed that the receipts were well above the expenses and the special funds not depleted. One thousand dollars were appropriated to the defense fund and \$1,000 to the sinking fund.

A resolution prepared by Dr. Nifong of Columbia, urging complete medical education under the auspices of the State University, was referred to the Committee on Health and Public Instruction with instruction to meet with the board of curators of the university in joint session for a discussion of the question.

The success of the postgraduate meetings was gratifying to the members and their continuation approved.

St. Joseph was chosen for the next place of meeting, and the following officers were elected:

President, W. J. Ferguson, Sedalia; vice presidents, R. L. Neff, Joplin; T. J. Rigdon, Kennett; T. C. Chowning, Hannibal; W. C. Gayler, St. Louis; J. Q. Chambers, Kansas City. Councilors, Second District, O. C. Gebhart, St. Joseph; Third District, W. D. Vandivert, Bethany; Fourth District, J. B. Wright, Trenton; Fifth District, J. R. Bridges, Kahoka; Sixth District, J. W. Martin, Kirksville; Seventh District, T. J. Downing, New London; Eleventh District, G. W. Hawkins, Salisbury; Twelfth District, Spence Redman, Platte City; Sixteenth District, G. D. Allee, Lamar; Seventeenth District, Guy Titsworth, Sedalia.



Delegates to the American Medical Association: F. E. Murphy, Kansas City, two years; S. L. Baysinger, Rolla, two years; C. R. Woodson, St. Joseph, two years; Elsworth Smith, St. Louis, one year.

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### INSTRUCTING MEDICAL OFFICERS OF THE U. S. PUBLIC HEALTH SERVICE

The Bureau of Public Health Service is arranging to give short courses of instruction to medical officers engaged in the work of examining and treating War Risk Insurance claimants through the office of the Supervisor of the Ninth District, St. Louis. These courses are in diseases of the chest and their purpose is to acquaint the men engaged in this work with the method of examination and the official nomenclature as required by the Public Health Service. Passed Assistant Surgeon Nathan Barlow has been detailed to temporary duty in St. Louis to arrange this work and give the first course of instruction, which began April 21, and extended through ten days.

This course was held at the time of the meeting of the National Association of Tuberculosis in St. Louis, and advantage was taken of some of their sessions to have lectures on diseases of the chest from men of national reputation. The clinical facilities of the Marine Hospital were employed, and in addition to the demonstration of chest diseases at that hospital talks were given by some of the well known chest specialists in St. Louis.

This first course was more or less experimental, and it is hoped to draw up from the experience a definite program for future courses until every local examiner of the Bureau of War Risk Insurance and the U. S. Public Health Service will have had an opportunity to attend one of the courses. They are to be given not only in St. Louis but at other points throughout the Ninth District where clinical facilities are available for the purpose.

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### EDUCATING THE RURAL DISTRICTS IN SOCIAL HYGIENE

In line with its purpose of bringing health education directly before the people, particularly in remote rural districts, and of cooperating with all existing public health agencies and societies, the American Red Cross has appropriated \$10,000 as a donation to the American Social Hygiene Association to aid that organization in establishing a traveling exhibit on social

hygiene. The exhibit will be mounted on a motor truck and will consist of a motion picture machine with films and slides on social hygiene, a fireproof booth that can be set up in school-houses or churches, and large quantities of literature and posters. A representative will precede the exhibit into each community in order to line up its special problems so that they can be dealt with specifically.

The American Social Hygiene Association was formed in 1914 by the union of the American Vigilance Association and the American Federation for Sex Hygiene, and later merged with the New Morrow under the name of the Society of Sanitary and Moral Prophylaxis. During the war, having secured from private sources some \$500,000, it supplemented the governmental efforts in combating venereal disease by cooperating with official agencies that were promoting the campaign in and around military and naval establishments.

The Association is now back on a peace-time program, but greatly enlarged and strengthened by its own experiences as well as those of the nation generally during the war. Its program has proved successful, and has been adopted in substance and expressed in terms of administrative organization and legislation by almost every state in the Union.

Recently the board of health of North Carolina suggested the value of a traveling exhibit which could go through the rural districts and bring their special problems squarely before the communities. Through the American Red Cross this was made possible. The first demonstrations will be made in North Carolina, and will be followed by demonstrations in other states. The board of health will pay rent for the exhibit which will cover actual expenses.

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### DANGER OF FLY POISONS

The number of small children poisoned by poisonous fly-destroyers is appalling. Formerly blotting paper soaked with arsenic was much used for these fly-destroyers. A little piece of this was put in an open saucer with some water and a little sugar. More recently shallow boxes of tin with a wick through the top have come into use, but on account of the habit of children of putting everything to their lips these seem to be as dangerous as the open saucer of poisoned water. The fact that sugar is added to draw the flies makes these boxes especially dangerous to young children. In South Africa the authorities have forbidden the sale, except by licensed chemists, of certain arsenical fly-destroyers, particularly the tin boxes which have

a wick or wicks through which the poison is drawn.

Some cases of poisoning from the use of fly poisons are doubtless never reported, as it is often difficult, sometimes impossible, for the physician to distinguish a case of arsenical poisoning from cholera infantum, the symptoms being so similar. How many children have been poisoned by these fly poisons and the deaths ascribed to cholera infantum can never be known. The cases reported are all children from slightly less than a year old to 6 or 7 years old. In many cases these children are not old enough to tell what they have taken if questioned about their illness, and unless seen taking the poison the chances are that the cause of the illness will never be known and it will be thought the child had cholera infantum. The danger is especially great to children of the foreign born for, as is well known, many of the foreigners are slow to call medical aid in case of children's ailments. In country districts, where it often takes several hours to get a physician, it is especially dangerous to use fly poisons.

These fly poisons are often exposed on the window sill because flies are attracted to the light. Babies also are attracted by the light and the window sill being in reach is therefore the most dangerous place to expose poisonous fly-destroyers of any kind.

There are as efficient and more sanitary ways of catching or killing flies, and fly poisons if used at all should not be used in any home where there are children or where children may visit. Certainly in our propaganda for health conservation, child betterment and educational movements this peril should be recognized and a warning be issued so that the coming summer does not witness a repetition of these fatalities and accidents that are wholly preventable. Arsenical fly-destroying devices are as dangerous as the phosphorus match. They should be abolished.

#### HEALTH OFFICERS ORGANIZE

In response to a call issued by the state board of health a meeting was held, April 6, at Jefferson City in the state capitol and a program on public health questions was rendered. Twenty-one deputy state commissioners of health were present.

The meeting was called to order by the temporary president, Dr. W. A. Clark, at which time the report of the committee on permanent organization was received. The report follows:

Health being the most priceless possession of man, the highest prerogative of good government

being the preservation of life, its prolongation and the mitigation of human suffering, we being the local exponents on all matters pertaining to public health, do organize in order to become more efficient officers.

This Association, to be known as the Missouri Health Officers' Association, shall elect a president, first vice president, second vice president, a board of three directors to be known as the executive board. The secretary of the state board of health shall serve as secretary and treasurer, and as editor of all articles that this Association may from time to time deem worthy of being published. Before publication the articles must be approved by this Association. Such articles shall always be marked as "Official Communication to the Public Emanating from the Missouri Health Officers' Association, a legally appointed body."

All members of the state board of health, the state commissioner of health, all deputy state, county and city commissioners of health, all divisions and subdivisions coming under the jurisdiction of the Missouri State Board of Health, and all persons interested in the public health, shall be eligible to membership. They may elect by a two-thirds vote anyone to honorary membership who has done special work along preventive medicine lines. The governor and the superintendent of public instruction shall be ex-officio members. The state veterinarian and his assistants shall be eligible for membership.

The following officers were elected: President, Dr. G. C. Eggers, Clayton; first vice president, Dr. U. F. Kerr, Springfield; second vice president, Dr. T. W. Cotton, Van Buren; board of directors, Drs. J. W. Bruton, Ozark; R. E. Crabtree, Butler; W. P. Smith, Troy.

The secretary was instructed to compile the rates of compensation allowed in the various counties for the services of the deputy state commissioner of health, which, together with reports of this meeting, are to be forwarded to each county health officer and to each county court.

#### RED CROSS DISASTER RELIEF IN 1919

Statistics concerning the thirty-nine reported major disasters in which the American Red Cross rendered aid during 1919 show that approximately \$421,000 was spent by the organization in relieving the distress of the victims. These disasters—which do not include minor catastrophes in which Red Cross Chapters went into action, but on which they have not rendered reports—resulted in a total of 650 deaths, 1,800



injured, about 50,000 made homeless, and a property damage of \$25,000,000. The most serious disaster was the flood and hurricane at Corpus Christi, Texas, which killed 200, rendered thousands homeless, and inflicted a property loss of \$4,000,000.

Of these thirty-nine disasters, there were seven tornadoes, two severe storms, two earthquakes, six floods, ten fires and explosions, three mine disasters, two race riots, a motor accident and the drought in Montana. Although there were few disasters that approached the importance of the calamities of other years, great storms were responsible, as in previous years, for a large percentage of the damage.

The Chicago race riot last August was very serious and gave opportunity for important work on the part of the Chicago Red Cross Chapter. Emergency relief to the unemployed lasted six days, during which time 9,772 families, or 32,096 individuals, were assisted.

The importance of home service in rehabilitation was emphasized many times during the year, and problems of family readjustment were handled effectively by home service workers experienced in dealing with various family problems. The destructive storm at Monterey, which resulted in extensive damage to the property of fishermen, was almost entirely a home service activity. Most of the men, many of whom are foreigners, were ruined by the loss of their boats, nets, etc., and in some instances there was desperate distress. The Red Cross met the situation, and served the double purpose of helping the fishermen and of developing a community spirit in Monterey, and interesting the community in the foreign groups in its midst.

The disaster record of 1919 bears evidence that the Red Cross is more strongly organized and more readily equipped to meet emergencies than ever before, a condition largely due to the well laid plans for combating misery and distress consequent to disaster which have been developed from past disasters, and which form a vital part of the peace-time program of the American Red Cross.

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## BOOKS FOR LEISURE MOMENTS

*Reading with discrimination broadens the mind  
and strengthens the mental grasp*

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WHEN Dr. Robert S. Carroll wrote "The Mastery of Nervousness" he won us completely over on account of his intelligent presentation of the subject and his undoubted talent to steer clear of the reefs which wreck many a barge on

which the medical man sails when he wants to write a near-medical work for the general public. The book had food for thought and it had serious intent and was well written. Its appeal was not only directed to the general public but also to all medical men, although this may not have been the object of the author. A decided step downwards is Dr. Carroll's latest book, "Our Nervous Friends" (The Macmillan Company, New York), for in it he affects a style of the novelistic art that is not his style, and writes of subjects which, as he presents them, although his intention may have been to "popularize" them, cannot be understood by the general public and mean nothing to those physicians who are the intelligent units in the profession. It is with considerable regret that we record our drastic criticism of Dr. Carroll's latest book, for we have admired his former writings and are of the opinion that his work along the literary lines he has hitherto chosen is most commendable. Perhaps "The Mastery of Nervousness" set too high a standard in popular medical literature and our disappointment is keen because Dr. Carroll has not kept up this standard in his latest book. Nevertheless, an author, once he has achieved success, should be wary of his talents, and should not do anything later on that might destroy the good opinion his previous writings have created in the mind of the intelligent reading public. P. S.

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THIS column is not often given to the review of novels, but when a novel is one that has qualities which place it in the front rank of modern fiction, it is meet that mention of it should be made here, especially if it contains a problem or problems which must be of interest to the intelligent physician. W. Somerset Maugham's much-discussed novel, "The Moon and Sixpence" (George H. Doran Company, New York), is decidedly the novel of the day, for it is characterized by sanity, a proper and just appreciation of literary values, and so close an attachment to truth that from the first page to the last page the story reads like a real autobiography and not at all like a work of fiction. Although some of the facts of Mr. Maugham's book are supposed to be taken from the life of Gauguin, the well known French painter, whose paintings express modernity carried to excess, there is enough of the fictional sort left to stamp it as a work of originality and as an expression on the part of the author of his philosophy of life. The dual personality evinced in the plain, unassuming Charles Strickland, who on account

of maladjustment to his environment is misunderstood and thought to be a decidedly commonplace man, and the development, or rather exhibition, of his genius directly the maladjustment is obliterated by change of scene and a complete severance with his routine life as a broker and paterfamilias, is a study in psychology that has high lights and must be alluring to all those thinking physicians who have not seldom noticed how often talent is crippled, if not completely vanquished, by maladjustments to immediate surroundings. Aside from this startling incident of the book, the complete reversal of the hero's character from a high and conventional concept of morality to the opposite with no thought of the ruin it leaves in its train, is something for every reader to ponder. To describe so artistic a performance as is this book in a short review without being guilty of many omissions, is impossible, hence it will be well not to attempt a detailed appreciation. Let it be said, nevertheless, that this is a man's book, written by a manly writer whose conception of life is all-embracing and who never glozes over certain matters which men, even of the reserved and supposedly refined sort, mention when they are with men only, and always romanticize when the company in which they happen to be, is mixed—that is composed of men and women. P. S.

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"ADVENTURES IN INTERVIEWING," by Isaac F. Marcossion (John Lane Company, New York), is the sort of book that reflects a journalistic style of writing that is engaging to a certain degree but is much more in place in our daily papers. Readers of interviews in our newspapers and of the tittle-tattle concerning the "great," know the good qualities of this style of writing and like it very much because of the ease with which they can read the articles and the readiness with which they can digest the "breezy" news. Depth these articles have not; introspection they lack; and as for any erudition on the part of the writer, that is wholly absent. In a newspaper this sort of writing has its literary "virtues," but in a book it is indeed completely out of place. Mr. Marcossion has the ready eye and the ready hand to jot down what he sees, and the ready ear to carry to his mind the things he hears. But like all journalists of the ephemeral in literature, he fails to pass the acquired knowledge through his own crucible and make of it something better than a plain, unvarnished statement of opinions and criticisms. Perhaps we are too critical of a

book that may be pleasing to those who like this sort of "literature"; and that there are many who will have nothing but praise for Mr. Marcossion's journalistic performance is an assured fact, since the reading public, fortunately for all authors, is made up of all sorts and conditions of readers, some of which are so inured to the "journalese" style of writing that any other style is distasteful to them. The volume contains many interviews, perhaps too many; the acumen of the author to ferret out personal characteristics is an asset of value; his superficial cleverness is undeniable. But even with these good qualities he fails to paint his "portraits" in oil of even partial endurance; water colors they are, and often only prints. P. S.

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STEPHEN GRAHAM has done much in these latter days to familiarize us with the customs and thought of the Russian people, and his studies embodied in his books—"Russia and the World" and "Russia in 1916"—are worth while for any reader who desires to know the Russian people "from the inside." Hugh Walpole, in his arresting novels, "The Dark Forest" and "The Secret City," has done excellent work and has illustrated to the world that at last a foreigner can grasp the true psychology of the Russian people as they are today. But long before the Revolution and before Bolshevism dominated the minds of millions of people in Russia—before the "reigns" of Kerensky, Lenin and Trotzky, there was a Russian novelist of so high an order that he foresaw what intellectual Russia was drifting towards—not the Revolution but the awakening of the people to the needs of the benefits which accrue from education and the advantages of freedom of thought. These were never written large in the stories of Anton Chekhov, but the current which runs through all of them is a clear current on which are mirrored the hope and the desire of one who sees when others still walk in darkness. Chekhov did not live to see the realization of his desires, and fortunate it is that he did not, for the present turmoil in Russia would be none to his liking. What Chekhov accomplished is apparent to all those readers who have followed his philosophy of life in the various volumes, excellently translated, which are being published at intervals by the Macmillan Company, New York; and in the latest volume, "The Bishop and Other Stories," we have Chekhov at his best. A broad field, indeed, did this master cover, and our gratitude should go out to him for his interpretations of the various phases of



Russian life and for his forevisioning and his modernity. Each short story, whether in this volume or in the preceding six volumes published by the same firm, is a picture of Russian life that leaves an indelible impression on the reader. All other books incorporating Russian ideas—not excepting Tolstoi—do not carry the message to the reader so forcibly as do the Chekhov stories—the message that the Russian people are not Russian only but international, and that the comedies and tragedies of their lives are the comedies and tragedies of all mankind. After reading Chekhov intelligently we get a much better history of the Russian people than we can possibly get from any of the books published today on Russia, even if they are not tinged too greatly with Bolshevism. For we see marshalled before us the poor and the rich, professional men and merchants, peasants and workmen—the whole canvas of Russian life in colors which bespeak genius of the first water on the part of the writer.

P. S.

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## NEWS NOTES

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DR. DORA E. BOWMAN of Kansas City, who has been in Europe representing the American Red Cross for over a year, has returned to this country and will probably be home this month.

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DR. J. M. P. FINNEY, Johns Hopkins University, and Dr. Charles H. Mayo, Rochester, Minn., have been elected honorary fellows of the Royal College of Surgeons, London.

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DR. R. A. WOOLSEY of St. Louis, for a number of years a member of the medical department of the Frisco Railroad, has been appointed chief surgeon of the Frisco System, succeeding Dr. G. W. Cale, resigned.

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THE Abbott Laboratories have recently purchased twenty-six acres of ground in North Chicago and will soon commence building an additional plant for the exclusive manufacture of synthetics and other chemicals.

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DR. NICHOLAS M. ALTER, former assistant to Professor Lenhossek and also pathologist to Howard Kelley, Baltimore, for over five years, and at Yale University, has associated himself with the Blumberg Biologic Laboratories of Omaha, Neb.

DR. A. M. WOOD of Lentner, secretary of Shelby County Medical Society for a number of years, has accepted a medical commission from the American Red Cross to assist in the fight against the typhus epidemic in Holland and the Baltics. Dr. Wood sailed the latter part of March.

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SCHERING AND GLATZ announce that prices of materials and general conditions permit a reduction in the price of atophan and that beginning with April 1, the price direct to physicians will be \$1.15 per box of twenty (7.5 grains) tablets, and of the powder \$3 per ounce carton, including postage and insurance.

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DR. W. H. MALLORY of Joplin was seriously burned on the face and hands, March 15, when escaping gas in the basement of his home exploded. He had shut off the meter after discovering a leak and waited several minutes for the gas to escape, but a collection of gas remained sufficient to cause an explosion.

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THE Arkansas State Medical Association which meets at Eureka Springs, June 8, 9, 10, has invited members of our association to attend their session. "The meeting promises to be very interesting," says Dr. W. R. Bathurst, secretary, "and we shall appreciate having our friends from Missouri with us to renew old acquaintances and help us make our session attractive and mutually agreeable."

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AN appeal comes from two more communities to send physicians to them. Mr. L. M. Davis, cashier of the Harrisburg Bank at Harrisburg, Boone County, says there is an opportunity in that community for a young physician to begin work, and Dr. J. D. Robinson of Belgrade, Washington County, writes that there is need of another physician in that district. Anyone desiring further information should address communications to them.

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DR. F. M. VESSELLS of Perryville, who served for eighteen months in the Medical Corps of the Army during the World War, has been decorated by the French government with the Order of University Palms. Dr. Vessells was commissioned a captain in September, 1917, and sailed for France in July, 1918, serving thirteen months in France, chiefly in the sanitary division. He was promoted to the rank of major in February, 1919, and discharged in August of that year.

DURING March the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Abbott Laboratories: Elixir Barbitol Sodium.

Antoine Chiris Company: Barbitol-Chiris; Barbitol Sodium-Chiris.

Gilliland Laboratories: Schick Test (Gilliland).

Hollister - Wilson Laboratories: Ampoules Corpora Lutea Soluble Extract-Hollister-Wilson; Ovarian Residue-Hollister-Wilson.

Vitalait Laboratory of California: Condensed Vitalait.

CHIROPRACTORS have succeeded in passing their bill at the present session of the New Jersey legislature, thus establishing the legality of this absurd practice in that state. The inactivity of the state medical society during the early days of the legislative session, the absence of an organized effort by the physicians to defeat the bill, and the vigorous work of the chiropractors before and during the session, are mentioned by the *Journal of the New Jersey State Medical Society* as the principal reasons for the passage of the bill. So well did the chiropractors hold their forces together that the physicians were refused an opportunity to protest against the bill before its final passage. The governor signed the bill and it is now a law.

THE installation of a private exchange telephone service for physicians and dentists has been in successful operation in a number of cities and an attempt was made sometime ago to install such service in St. Louis but fell through. The service is giving physicians good satisfaction in St. Joseph and other cities and the company having charge of the service at St. Joseph contemplates installing an exchange in St. Louis. They call attention to their effort in the advertising pages of this issue. We have letters of commendation and indorsement of the company and the character of service rendered to our members in St. Joseph, and we direct the attention of our members in St. Louis in this manner so that they may investigate the undertaking with a view of encouraging its operation in St. Louis.

DURING the period of the Christmas meetings of the American Association for the Advancement of Science, an anthropological society was organized in St. Louis, largely under the stimulation of Dr. Aleš Hrdlička, who visited the city at that time. The object of the society as

stated in the constitution is the promotion of research in all branches of anthropology. The officers are: President, Prof. R. J. Terry; vice president, Dr. H. M. Whelpley; secretary-treasurer, Dr. C. H. Danforth; councilors, Drs. W. W. Graves, Albert Kuntz, R. Walter Mills, Sherwood Moore, Daniel M. Schoemaker and Mr. J. Max Wulfin. Two regular meetings have been held. At the first Dr. R. Walter Mills presented a paper on "Variation in Physical Type and Visceral Function," and at the second Dr. H. M. Whelpley spoke on "Notched Indian Hoes, the Most Specialized of Indian Agricultural Implements."

AN interesting circumstance of the fiftieth annual meeting of the American Public Health Association to be held in 1921 is that Dr. Stephen Smith, the founder and first president of the association, will at that time be approaching his ninety-ninth birthday. Dr. Smith is still hale and hearty and possesses his faculties to a remarkable degree and it is his intention to read a paper at the meeting referred to. The association was founded at New York City in 1872 as a strictly scientific body, somewhat on the order of the royal societies of Europe. More recently the membership has been broadened so that those may join who have a more general interest in public health, including health officers, laboratory men, school medical inspectors, industrial hygienists, public health nurses, physicians interested in preventive medicine, etc. Dr. George H. Jones of Jefferson City is chairman of the committee on membership for Missouri, with whom those interested in the objects of the association are invited to correspond. The members of the association receive the *American Journal of Public Health* and the *A. P. H. A. News Letter* monthly. Dues are \$5 per year.

THE annual meeting of the Western Electro-Therapeutic Association will be held at the Little Theater, Kansas City, May 27-28, under the presidency of Dr. Burton B. Grover of Colorado Springs, Colo. This association was organized for the purpose of bringing together the physicians of the Missouri Valley who are interested in physiotherapy and electrotherapy, with a view to cultivating and promoting knowledge in whatever relates to this special line of work. The program includes the following papers: Dr. Jefferson D. Gibson, Denver, "Treatment of Tuberculosis"; Dr. J. H. East, Denver, "Light"; Dr. C. O. Donaldson and Dr. G. E. Knappenberger, Kansas City, "Roentgen-Ray and Ra-



dium in the Treatment of Deep Malignancies"; Dr. H. W. Nye, Osborne, Kan., "Treatment of Goiter, with Report of a Case"; Dr. H. Winnett Orr, Lincoln, Neb., "Revision of Position in Unsatisfactory Fractures, the Value of Electrotherapy and Physiotherapy in the After Care"; Dr. E. H. Skinner, Kansas City, "Light Therapy." Clinics will be held in the various hospitals from 8 to 10 each morning and Dr. Grover will give his second course of lectures in electrotherapy the first three days of the week.

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Announcement is made of the launching of the National Anesthesia Research Society, with the purpose of collecting data and prosecuting original research in this field of medicine. The research committee, which will have supervision of original work and editing material designed for the profession and professional press, is headed by Dr. F. H. McMechan of Avon Lake, Ohio, editor of the *Quarterly Supplement of the American Year Book of Anesthesia and Analgesia*. Representative anesthetists of the country who have distinguished themselves by research and progress in their field are invited to join the committee. The society has been endowed with limited funds which will permit it to demonstrate that there is a field of usefulness for it. No other branch of medicine has made so little advancement, especially in the line of good substantial research work. Literature of general anesthesia published for the past ten years shows a lack of any real definite scientific work done. In the past few years increasing interest has been shown in this very important branch of medicine, therefore any movement which will tend to gather definite facts, correct statistics, and scientifically improve new or old methods of anesthetics, is to be highly commended and given all the support possible.

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COMBINING in a single apparatus the moving picture camera and the roentgen-ray machine, Drs. Lormon and Comandon, eminent French scientists, have evolved a marvelous new contrivance, the "radiocinematograph," which makes possible "movies" of the workings of the human body's interior organs. Medical experts attached to the American Red Cross Commission to Europe are now considering the application of the new science of radiocinematography to extensive clinical work in the centers of epidemic where the Red Cross is operating. With this new invention, which has reached the practicable stage but is not yet entirely perfected, the interior functioning of living organ-

isms may be viewed on the movie screen. The beating of the heart, the movements of digestion and respiration, the actions of the bony articulations and the intricate network of nerves and muscles which set the limbs in motion, are depicted to the life on the screen. Discussing the invention, Dr. Lormon states that the greatest difficulty encountered in their researches was the danger of thermic infiltration by the ultra violet rays during the photographing of subjects. To overcome this difficulty the inventors devised a method for changing the character of the rays employed, an achievement comparable to the original discovery of the roentgen ray.

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THE New York Association for Medical Education, organized last August to develop New York's opportunity to become the medical center of the world, has indorsed the campaign of Post-Graduate Medical School and Hospital for a \$2,000,000 endowment fund, and the board of directors, on which every medical school in the city is represented, has given official approval to the endowment campaign. Dr. Wendell C. Phillips, president of the association, says America must meet the enormous demands of the physician for training that will keep him abreast of the progress of medical science, and as Post-Graduate is the oldest institution for postgraduate medical training in the nation it is in an excellent position to do a great work. But if this work is to be done it must have funds. Berlin and Vienna have fallen as centers of medical education, but even if they had not New York's opportunity would be huge for no where else is to be found the wealth of clinical material that this city holds. Medical schools and hospitals in New York—and conspicuously Post-Graduate—are bending every nerve to provide the training rendered abroad. If they succeed, the 3,000 to 5,000 physicians who went abroad in the years before the war will go to New York. It will mean a saving of time and money, for trips abroad consume time and are expensive. Institutions to provide this sort of training must be provided at home. We have the instructors, for American physicians and surgeons rank high in the medical world. We must teach our young physicians what they should know and we must give the older ones a chance to learn the new things that medical science is constantly developing. The endowment fund now has reached \$545,000, according to an announcement by Dr. James F. McKernon. Recent big subscriptions are: Dr. John F. Erdmann, \$10,000; A Friend, \$30,000; Havens Relief Fund, \$5,000; Anonymous, \$10,000;

Elton Parks, \$1,000; E. F. Searles, \$5,000; Mrs. L. M. Blumstein, \$10,000; William M. Flook, \$10,000; E. W. Clucas, \$10,000; W. V. Griffin, \$10,000; H. H. Rogers, \$10,000; Mrs. Willard D. Straight, \$5,000; Marion Cutting Fund, \$6,000; Knapp Fund, \$50,000; Anonymous, \$10,000.

## MEMBERSHIP CHANGES, APRIL

### NEW MEMBERS

Black, Donald R., 622 Lathrop Bldg., Kansas City.

Blanchard, Irene M., Webster Groves.

Booth, Herbert R., Hamilton.

Bowman, Charles B., Zita Bldg., Perryville.

Chapman, Warren B., Snyder Bldg., Carthage.

Clay, Homer T., City Hospital, St. Louis.

Conley, Dudley S., Guitar Bldg., Columbia.

Cooper, Thomas E., Gallatin.

Dalton, Michael H., 711 N. Kingshighway, St. Louis.

Dunham, Leslie H., Heath Bldg., Pattonsburg.

Eads, Lee J., Bird St., Hamilton.

Edwards, Thomas B., 2603 S. Broadway, St. Louis.

Ehreshmann, Joseph J., Humboldt Bldg., St. Louis.

Farr, Fred F., Des Arc.

Flanary, David L., Lister Bldg., St. Louis.

Frank, Walter E., 1319 S. Broadway, St. Louis.

Gerard, Jules H., City Hospital No. 1, St. Louis.

Giggs, Charles A., Greensburg.

Graham, James W., 5731 Troost Ave., Kansas City.

Greene, Joseph W., Carl Bldg., Independence.

Harris, Clarence D., Morley.

Helmes, Lloyd O., Monroe, Wis.

Hodge, Russell L., 909 Rialto Bldg., Kansas City.

Hoyt, William W., 401 Humboldt Bldg., St. Louis.

Kalloch, Dudley C., 608 Woodruff Bldg., Springfield.

Kinard, Kerwin W., 310 Rialto Bldg., Kansas City.

Langan, William J., Jr., Lister Bldg., St. Louis.

Lotz, John A., 2323 N. Union Ave., St. Louis.

McPheeters, James W., Poplar Bluff.

Menefee, Buell F., 108 Main St., Montgomery City.

Mercer, Charles W., 310 Rialto Bldg., Kansas City.

Miller, Joseph E., Mexico.

Moreland, George H., 1205 Troost Ave., Kansas City.

Orr, Charles A., Mendon.

Printy, Louis E., 316 Wall Bldg., St. Louis.

Reyes, Anthony R., Missouri Pacific Hospital, St. Louis.

Richman, Samuel H., 315 E. Tenth St., Kansas City.

Robinson, W. Arch, Sturgeon.

Sante, L. R., 515 Lake Ave., Webster Groves.

Scharff, Eugene A., 943 Arcade Bldg., St. Louis.

Smith, Frank J., 3624 S. Broadway, St. Louis.

Soteropoulos, John S., Gayety Bldg., Kansas City.

Stuart, Francis I., Independence.

Talley, J. R., Mountain Grove, R. D. No. 8.

Tanquary, James H., 930 Belt Ave., St. Louis.

Trice, Hoyt S., 213 Wall Bldg., St. Louis.

Walthall, Damon, 201 Westover Bldg., Kansas City.

Weir, Loren R., Pattonsburg.

Wheelon, Homer, Bethesda Hospital, St. Louis.

White, Park J., Jr., 5870 Bartmer Ave., St. Louis.

Williams, Reuben H., 120½ E. Morrison St., Fayette.

### CHANGES OF ADDRESS

Axline, Joseph T., 4516 Bircher Rd., St. Louis, to 4141A N. Newstead Ave.

Barnes, Algernon S., Jr., 210 Central National Bank Bldg., St. Louis, to 5589 Vernon Ave.

Bogard, Edward, Greenville, S. C., to U. S. Public Health Service, Century Bldg., St. Louis.

Broderick, David E., 933 Rialto Bldg., Kansas City, to 738 Lathrop Bldg.

Castelaw, Rush E., Punton Sanitarium, Kansas City, to Wesley Hospital.

Clark, Charles F., 4925 Chestnut, Kansas City, to 810 Waldheim Bldg.

Cleveland, A. H., 1504 S. Grand Ave., St. Louis, to 3145A Meramec St.

Coffey, Grundy C., Linkville, to Colony for Feeble-minded, Marshall.

Conrad, Harry S., Schmid Bldg., St. Joseph, to Bartlett Bldg.

Dandurant, Louis J., 315 Physicians and Surgeons Bldg., St. Joseph, to Bartlett Bldg.

Freund, Newton M., 1440 S. 18th St., St. Louis, to 3662 Lafayette Ave.

Geiger, Charles G., 614½ Francis St., St. Joseph, to 210 N. Seventh St.

Gummig, Edward A., 2902 Felix St., St. Joseph, to 801½ Felix.



Hatcher, E. D., Palmyra, to 426 W. State St., Springfield.

Henke, C. F., Tenth and Geyer, St. Louis, to 900 Russell Ave.

Heuman, George W., 229 Frisco Bldg., St. Louis, to 957 Arcade Bldg.

Heuston, Howard H., City Hospital, St. Louis, to Craig.

Hummel, Louis G., Witty, to Oil Hill, Kan.

Jones, Austin B., Shackelford, to 2342 Jackson Ave., Kansas City.

Lewald, James, 3109 Bent Ave., St. Louis, to 4019 Botanical Ave.

McCarty, Eugene D., Poplar Bluff, to Columbus, Ky.

McKinley, W. E., Grant City, to Guernsey, Wyo.

Marder, J. Lee, 405 University Club Bldg., St. Louis, to 3157 N. Vandeventer Ave.

Marty, Loraine A., 820 Rialto Bldg., Kansas City, to 805 McGee.

Minton, William H., King Hill Bldg., St. Joseph, to Bartlett Bldg.

Owens, James F., Ballinger Bldg., St. Joseph, to Schneider Bldg.

Packwood, Samuel D., 824 Edmund St., St. Joseph, to Physicians and Surgeons Bldg.

Parker, William G., 400 Landers Bldg., Springfield, to Mt. Vernon, Ill.

Pieper, Henry G., 1911 S. 12th St., St. Louis, to 1301 Geyer Ave.

Redmond, Thomas J., 403 Corby-Forsee Bldg., St. Joseph, to Physicians and Surgeons Bldg.

Renaud, Emmett C., 803½ Francis St., St. Joseph, to Schneider Bldg.

Riley, Joseph B., Benedict, Kan., to Altoona, Kan.

Ryan, Lawrence A., 3504 Shenandoah Ave., St. Louis, to 220 Collinsville Ave., East St. Louis, Ill.

Sell, Wilmer J., Conway, to Crocker.

Senor, Samuel D., 2609 Mitchell Ave., St. Joseph, to Rock Island Bldg.

Simmons, B. B., Logan Bldg., St. Joseph, to Corby-Forsee Bldg.

Swanson, John T., 626 Lathrop Bldg., Kansas City, to 405 Waldheim Bldg.

Timerman, Arthur R., Georgetown Bldg., St. Joseph, to Commerce Bldg.

Williams, J. E., 321 Clark Ave., Webster Groves, to Bourbon.

Willier, Albert F., 540 E. Commercial St., Springfield, to 1731 Magnolia Ave., Los Angeles, Calif.

Wippo, E. W., 3510A N. Grand Ave., St. Louis, to 4134 Natural Bridge.

#### RESIGNED

Edwards, Edwin D., Palo Alto, Calif.

Haynes, Frank W., Topeka, Kan.

Kleinschmidt, Harry E., New York.

#### REINSTATED

Miller, George W., Joplin.

#### DECEASED

Balsley, Martin T., Joplin.

Phelan, Richard A., St. Louis.

Pitts, Barton, St. Joseph.

Quinn, Edward S., Kirksville.

Rice, James Tipton, Excelsior Springs.

Upshaw, Harry A., St. Louis.

Wichterich, Robert F., Cape Girardeau.

## OBITUARY

### RICHARD A. PHELAN, M.D.

Dr. R. A. Phelan of St. Louis, a graduate of the St. Louis College of Physicians and Surgeons, 1909, died at his home, March 14, aged 50 years. He was a member of the St. Louis Medical Society and the State Medical Association.

### EDWARD S. QUINN, M.D.

Dr. Edward S. Quinn of Kirksville, a graduate of Marion-Sims Medical College, 1896, died at his home, Feb. 24, 1920, aged 62 years. He was engaged in practice in Kirksville during the whole of his professional life and at the time of his death he was city health officer. In the death of Dr. Quinn the Adair County Medical Society and the State Association have lost a faithful and valuable member; the community an efficient and painstaking practitioner, and the city a competent official.

J. W. MARTIN, M.D.

### MARTIN T. BALSLEY, M.D.

Dr. M. T. Balsley of Joplin, a graduate of the Medical College of Indiana, 1881, died at his home from heart disease, March 9, aged 67 years. After practicing in Marshall, Mo., his birthplace, for several years, he went to Danville, Ill., and practiced there for six years, then returned to Missouri and established himself in Joplin, where he took an active interest in health matters, and for two years was president of the board of education. He was a member of the Jasper County Medical Society, the State Medical Association, and a Fellow of the American Medical Association. His son, Dr. C. M. Balsley of Joplin, is a member of the Jasper County Medical Society.

### JAMES R. CHAMPION, M.D.

The Howard County Medical Society held a meeting at Fayette, March 12, and passed the following resolutions on the death of Dr. J. R. Champion, Hilldale, president of the society.

WHEREAS, The Great Physician has called from earth our brother, J. R. Champion, depriving us of his companionship and counsel, we mourn our loss and we recognize in his death that the Howard County Medical Society has lost a valuable member who was always ready to administer to the sick and relieve the distressed; therefore, be it

*Resolved*, That we extend to his wife and children and relatives our sympathy, knowing that they will be comforted by his God and the heritage of the Christian life of the one that has just gone on before;

*Resolved*, That a copy of these resolutions be spread on the minutes of the Howard County Medical Society, a copy sent to his wife and family at Hilldale, and a copy furnished to the secretary of the Missouri State Medical Association for publication in the JOURNAL of the state association.

DR. C. H. LEE	} Committee.
DR. T. J. PAYNE	
DR. C. W. WATTS	
DR. T. H. PAYNE, Vice President.	
DR. C. W. WATTS, Secretary.	

### ROBERT F. WICHTERICH, M.D.

Dr. R. F. Wichterich of Cape Girardeau, a graduate of the Barnes Medical College of St. Louis, 1899, died very suddenly while sitting in his office, April 2, 1920, from angina pectoris, aged 52 years. Dr. Wichterich was one of the best known and universally esteemed physicians in Cape Girardeau and surrounding territory. He was active in the work of the county and state medical societies, having served the county medical society as president and on numerous committees. He was a member of the city board of health, a member of the Southeast Missouri Medical Association, and Fellow of the American Medical Association. Every movement for the improvement of the health conditions of the community found Dr. Wichterich a sympathetic helper and his own physical condition did not deter him from energetically enlisting in such work. For several years he was aware that he was a victim of Bright's disease but with care and attention he prolonged his useful life beyond the expectation of his medical advisers. In his death the county society and state association lose an earnest and consistent member, and the community a faithful and sympathetic physician and progressive citizen.

### BARTON PITTS, M.D.

Dr. Barton Pitts of St. Joseph, a graduate of the Medical Department of the University of Baltimore, 1881, died at his home, March 10, from heart disease, aged 62 years. After prac-

ticing five years in Norfolk, Va., he moved to St. Joseph, where he practiced continually, specializing in diseases of the eye and ear. He was professor of ophthalmology in the Ensworth Medical College at St. Joseph until it closed in 1914. He was a member of the Buchanan County Medical Society and the State Medical Association.

The Buchanan County Medical Society adopted the following resolutions in memory of Dr. Pitts:

WHEREAS, It has pleased Almighty God to remove from our midst Dr. Barton Pitts, a member of this society, a fellow practitioner well beloved by all its members; be it

*Resolved*, That the Buchanan County Medical Society has sustained a profound loss of one of its honored members and fellows whose place it will be impossible to fill; that the medical profession of this city realizes its loss of a most progressive and prominent ophthalmologist and friend, whose affable smile and genial fellowship were keenly appreciated; that St. Joseph observes with marked regret the passing of one of its prominent citizens whose uplifting power will be distinctly missed; and be it further

*Resolved*, That the fellows of this society extend their sympathy in our mutual sorrow to the wife and family of our departed friend, and that a copy of these resolutions be sent to Mrs. Barton Pitts conveying to her our sense of profound sorrow in the loss we have mutually sustained.

### JAMES TIPTON RICE, M.D.

Dr. James T. Rice of Excelsior Springs died very suddenly at his home on the morning of April 6, aged 59 years, from cerebral hemorrhage, the attack being of only a few hours' duration.

The death of Dr. Rice came as a profound shock to the entire circle of his acquaintance and to the community in which he lived. A zealous Christian, a faithful physician, and a beloved citizen has paid the supreme debt of humanity.

His medical education was obtained from the schools of Louisville, Ky., and Kansas City, Mo., graduating from the University Medical College of Kansas City in 1889 and locating for practice in Kearney, Mo., in connection with his brother, Dr. J. J. Rice, who was then living. Some fifteen years ago he moved to Excelsior Springs where he conducted a very successful practice until the day before his death.

Dr. Rice was an honored member of the profession and of the county, state, and national medical societies. He always kept awake to community betterment, and the church, the school, and the state will miss his counsels.

The Clay County Medical Society attended his funeral in a body, the remains being interred in Crown Hill Cemetery at Excelsior Springs, April 7, after beautiful and appropriate



services at the Baptist Church. He leaves a devoted wife and a little nephew in his immediate family, and a number of near relatives who are indeed bereaved by his death. Thus passes a noble character to the Great Beyond, where his reward is in keeping with his goodness.

J. J. GAINES, M.D.

## CORRESPONDENCE

### ON PROFESSIONALISM, IDEALISM AND LABOR UNIONS

ST. LOUIS, March 25, 1920.

*To the Editor:*—Several medical journals have recently published the disquieting statement that the physicians of England were contemplating affiliating with the labor organizations of that country on account of the recent health legislation that has been enacted, which has reduced the medical fee in England to a mere pittance. Inasmuch as this inclination seems to assume the aspect of an obsession in the professional and educational world today, the situation should be worthy of analysis, and the procedure either made justifiable or else utterly condemned. St. Louisians are particularly interested at the present moment, since the question is now being vividly agitated in their public school system.

There is an ancient Eastern maxim: He who steals a lion cub from a lioness stands in less danger than he who seeks to separate an illusion from its possessor—which is as it should be, according to our conception of things idealistic. It is comforting to know that while the agitation and turmoil anent professions and labor unions are waxing hot, yet those engaged in the ebullition are by far in the minority. Take away the illusive idealism of the physician and educator and what have we left but a prosaic personage, strictly concrete and matter-of-fact. The economic world today is getting a sample of what happens when the idealist is separated from his illusions. They at once seek their due, not in the abstract but in cold standard value.

Without delving into the evolution of unionism, it may safely be asserted that while unions have been based on logical and laudable conceptions, they have, unfortunately, only too often manifested the desire to evince the strength which is engendered through union, while a docile public has timidly stood by and then paid the cost of viewing the burlesque with their hard earned dollars. By even harboring the idea of merging with labor unions, professionalism is at once stultifying itself in the eyes of what is today fast becoming an analytical public; because it thereby tacitly admits that

it is unable to attain its desired ends without having recourse to the big stick of unionism. If educators and physicians are the most underpaid individuals today, they have no one to censure but themselves, since they have evidently been content to meander along in the self-satisfaction attending their idealistic pursuits. The flotsam and jetsam following in the wake of the recent upheaval having upset economic conditions to an alarming extent, has brought the educator to a sudden realization of the semi-idealism in which he has been subsisting, and presto! the pendulum swings to the other extreme and we find him making overtures to the labor unions, or rather listening to the mephitic smile and alluring promises that would beguile him from his visionary paths.

Professionalism can never logically merge with labor unionism, for the very manifest reason that in no portion of the universe do we find the transcendental merging with the material for a permanent period to form a distinct entity. True, the finite and infinite are linked to form what we term, life; yet there is nothing in common between the two. The concrete body performs its functions during our mundane period and then through physical corruption vanishes into its source, the elements. The spirit presumably does likewise. Of the link which binds the two, we know nothing.

WILLIAM H. THALER, M.D.

## MISCELLANY

### PROGRAM OF THE SCHOOL FOR HEALTH OFFICERS

Medical Department University of Missouri

June 14-19, 1920

The University of Missouri offers to the health officers of the state appointed under the law of 1919 a course designed to assist them in their work. There will be no charges made, and every effort will be put forth to make the time spent in Columbia both pleasant and profitable. It is expected to make this course a yearly affair, and if the necessity is shown by the attendance the course will be repeated twice yearly so that all health officers may attend. The course is given in collaboration with the State Board of Health, and each day some member of the board will appear on the program. Further information concerning the course may be had by writing to the Dean of the Medical School, Dr. Guy L. Noyes, Columbia, Mo. The program for the week, June 14-19, follows:

MONDAY, JUNE 14

2 p. m. The State Board of Health

Dr. W. A. Clark, president

3 p. m. The Anatomical Types of Bright's Disease  
and the Relation of the Urine Thereto

Dr. D. H. Dolley

4 p. m. The Public Health Laboratory

Dr. M. P. Ravenel





## DISCUSSION

DR. T. C. HEMPELMANN: It seems to me that Dr. Cooke's paper gives a rather convincing demonstration of the value of the complement fixation test in tuberculosis. It was my privilege to study some of these cases with him and it was particularly the cases of "probable tuberculosis" that interested us most. It was by no means rare that a child coming in for examination before admission to an orphan home, would be passed by a man in the dispensary as normal physically and in the routine blood examination it would be found that the complement fixation test was positive for tuberculosis. He would be subjected to a more careful physical examination and this time suspicious findings discovered. Finally, the roentgen ray would show definitely pathologic lesions which suggested tuberculosis. It is interesting to speculate why younger children give negative reactions even when actively tuberculous. This may be due to the well known lack of resistance of the younger child to tuberculous infections. We know that a child 3 months old with signs of active tuberculosis will almost invariably die. At 1 year a few more survive but over three-fourths die. Children who reach 2 years of age before tuberculosis develops have a much better chance of surviving, and the older they are at the time of infection the better their chance of life. Possibly this increased resistance with increasing age depends on antibody formation which must be present in a certain definite concentration to bring about a positive complement fixation test. I confess to considerable scepticism with regard to the test in the early part of this work, but I have long since become converted, and believe now that it affords valuable aid in the recognition of active tuberculosis even during the period of childhood.

DR. VEEDER: I must take a different viewpoint in regard to the importance of the complement fixation test. I have been watching the test with considerable interest for several years, hoping that it might throw some light on the question of clinical activity in tuberculosis. Dr. Cooke has shown us tonight two tables. In both tables the tuberculin reactions were positive in all cases, showing that there was a tuberculosis infection. In these two tables there is divided the clinical cases from the standpoint of known active tuberculosis and probable active tuberculosis. In both of these we have approximately the same percentage of positive fixation tests. If the complement fixation test is to be of value it must show much more than the simple tuberculin test which indicates only infection with the tubercle bacilli. From the large number of negative results in the known active cases in children as shown in this table, it seems to me very little reliance can be placed on the test. If the child gives a positive reaction it may be that the tuberculosis is active, but of this we are by no means certain.

The greatest weakness, however, is the fact that although the child may have an active tuberculous lesion, the reaction may be negative, and so in a questionable case or a doubtful case shows practically nothing more than could be obtained from the positive skin reaction.

I think the work is very important and it should be carried out as a matter of study very much further, and hope that in some way it may be correlated with the clinical picture. It seems to me that these findings of Dr. Cooke's are chiefly of importance at present for their negative value.

DR. SINGER: Two years ago Dr. Ives and I reported a series of 100 cases from the tuberculosis clinic and the reports of our complement fixation tests approximated the reports that Dr. Cooke gives tonight. The method Dr. Ives used was quite different but I think was based on the same factor. A certain thought struck me as Dr. Cooke spoke about the children in the first year not having shown reaction. It is gen-

erally understood that children in the first, second and third years have not lived long enough to heal tuberculosis; while only eleven cases were reported, it seems that it bears out the known truth that children who do develop tuberculosis do not develop antibodies. The question as we treated it was, when we found complement fixation positive we found clinical activity in the majority of cases; but we admitted that certain cases of tuberculosis could exist without being demonstrable with any clinical evidence we have at present.

The adults have a type of tuberculosis quite different from the "children" type. The adult type is demonstrated by physical signs and the stethoscope or by physical signs and the roentgen ray.

DR. LOEB: I would like to ask Dr. Cooke if it is not possible to make the test more specific by using specific absorption in those cases in which he found no specific reaction?

I would also like to ask whether the absence of antibodies in young animals is not a phenomenon common to various immune reactions?

DR. COOKE, closing: I have separated these cases into groups chiefly to determine the value of the test. I feel that these children grouped as "probably active" have pathologically active tuberculosis, although the signs of clinical tuberculosis may be relatively slight. They did not all have fever. They all had positive skin tests. Some had very definite paravertebral dullness. I believe these children have clinical tuberculosis, but not that they have the same type and symptoms that characterize the infection in adults or in more advanced cases in children. These groups were separated because it was thought necessary to compare the results with the undoubtedly active cases, but there seems no doubt as to their having an active process.

I may say in answer to Dr. Loeb that I have not tried absorption tests. It might be possible to differentiate by that method certain of the acid-fast organisms.

It may be very difficult to demonstrate antibodies in young individuals or it may be possible that it requires a certain length of time after infection to produce them.

Whether the lipotropic fixing bodies in syphilis are an example of antibodies in young infants may be questioned, since the reaction is nonspecific, but even here the infection has existed since early uterine life.

### 3. A STUDY OF FORCED RESPIRATION: EXPERIMENTAL PRODUCTION OF TETANY.

—By SAMUEL B. GRANT AND ALFRED GOLDMAN.

The present investigation was undertaken with the idea of determining the cause of the alkalinity of the urine after forced respiration, a point which had been noted in a previous series of experiments. In the course of the work it was found that all the essential symptoms of tetany could be produced in the human subject by forced respiration.

The experiments consisted in having the subject breathe as deeply as possible, at the rate of about fourteen per minute, in time with a metronome, and with pneumographs attached so that the depth of respiration could be more easily maintained. Symptoms of tetany developed in from fifteen to sixty minutes. The first sign usually was tingling of the fingers, after about ten or fifteen minutes of forced respiration. A little later Trousseau's sign for tetany could be obtained, and also Chvostek's sign. Finally the hands spontaneously went into the typical spasm of tetany, and the muscles of the face contracted spontaneously, so that the lips were puckered. Spasm of the feet was noted several times. In one experiment the subject had a complete tetanic convulsion, lasting about thirty seconds, at the onset of which he gave a loud involuntary scream. Tests of the electrical re-

actions of the muscles showed a great increase of irritability to electrical stimuli after forced respiration.

The washing out of carbon dioxide by forced respirations reduced the alveolar carbon dioxide tension from an average of 41.8 mm. before to 21 mm. at the end of



forced respiration. This disturbed the  $\frac{\text{H}_2\text{CO}_3}{\text{NaHCO}_3}$  ratio,

in the blood, on which the hydrogen ion concentration depends. In the readjustment of this ratio,  $\text{NaHCO}_3$  passed out into the tissues and was partly excreted by the kidneys. Accordingly the alkali reserve of the blood fell from an average of 59.5 volume per cent. before to 44.9 volume per cent. at the end of deep respiration, and the urine became decidedly alkaline, its  $\text{P}_\text{H}$  rising from 5.2 before to 7.4 after. This change did not quite compensate for the loss of carbon dioxide, because actual determinations of the hydrogen ion concentration of the blood showed that it had become more alkaline, its  $\text{P}_\text{H}$  rising from an average of 7.41 to 7.57. A further evidence of the attempt of the body to compensate for the loss of carbon dioxide was shown by the decreased excretion of ammonia, only 2.23 mg. of ammonia nitrogen being excreted per half hour during deep respiration, as against 7.54 mg. before. There was obviously, therefore, a condition of "alkalosis" in the body during overventilation. Researches of Wilson, Stearns, Thurlow, and Janney, and of MacCallum, McCann, and others, seem to indicate that alkalosis may be a cause of tetany. But there is also much well founded evidence that calcium deficiency may be a cause of certain forms of tetany. Accordingly, analyses of calcium in the blood were made, and it was found that it was increased from 12.47 mg. per 100 c.c. of serum to 13.31 mg. It is possible that a part of the calcium was precipitated when the carbon dioxide of blood was reduced, and that the observed increase was of a compensatory nature, being an attempt to replace inactivated or unionized calcium. That calcium was not precipitated as gross particles was shown by the fact that centrifuging the serum had no effect on the analysis. Very minute particles, however, might have been held in solution by the colloids of the serum.

In view of the data so far obtained, we may conclude that alkalosis is probably the underlying factor of the tetany of forced respiration. Further investigations will be made to determine whether calcium plays a part.

#### DISCUSSION

DR. ERLANGER: This investigation by Messrs. Goldman and Grant is interesting, one might even say unique, in several respects. In the first place, it is one of the few complete and thorough investigations that have been made by students in this school before graduation. Secondly, it is an investigation that has grown out of a suggestion made by the students themselves. The thoroughness of the work and the application the authors have shown in doing it cannot be commended enough. They have given every spare moment for the problem, and perhaps some that they did not have to spare; but the results we have had the opportunity of listening to justify the time, it matters not what its source.

It has been interesting in still another way, and that is with respect to the inconveniences, to put it mildly, to which they have submitted in carrying on the work on themselves. The drawing of two or three samples of blood from an arm vein and exaggerated respiration to the point of bringing on headache and tetany were part of every experiment, and in one, indeed, a convulsion. This was done, let me say, despite frequent warning of the danger they ran. Fortunately, nothing untoward happened to mar the completion of their very valuable contribution.

DR. SHAFFER: I had hoped to be able to say about this interesting paper just what Dr. Erlanger has said so well. I have had the privilege of hearing from

Messrs. Goldman and Grant about this work during its prosecution and have enjoyed their success almost as much as they. It is an important contribution.

Their results help to explain an observation made by Mr. Hubbard and myself some years ago on blood sugar. We found that forced respiration largely prevents the hyperglycemia which otherwise results from anesthesia by ether. We were not able to explain the mechanism of this effect of forced respiration at the time, but the explanation seems now reasonably clear. It is probable that it is due to the blowing off of carbon dioxide and the consequent alkalosis, which appears to inhibit hydrolysis of glycogen and thus retard the rapid formation of sugar which otherwise occurs.

I am glad to extend my congratulations to Messrs. Goldman and Grant and hope they will continue their interesting work.

#### 4. PATHOLOGY OF PNEUMONIA FOLLOWING INFLUENZA.—By DR. E. L. OPIE.

Pneumonia following influenza is in most instances bronchopneumonia, but typical lobar pneumonia has been found in necropsies representing 40 per cent. of pneumonias of influenza. Lobar pneumonia is frequently accompanied by purulent bronchitis and in a considerable number of necropsies lobar and bronchopneumonia have occurred in the same individual.

Statistics based on the clinical diagnosis of lobar and bronchopneumonia following influenza are so inaccurate that they have little if any value.

The bronchopneumonia of influenza exhibits characters which serve to distinguish it from other forms of bronchopneumonia: (a) The associated lesions of the bronchi are unusually severe; purulent exudate accumulates within the lumen and the lining membrane is destroyed. (b) Pneumonia is frequently hemorrhagic with accumulation of blood within alveoli and within and surrounding bronchi. (c) There is unusual susceptibility of the injured bronchi and of the pulmonary tissue to secondary invasion by streptococci and staphylococci with consequent necrosis and supuration. (d) Bronchiectasis frequently accompanies bronchitis. (e) Bronchopneumonia frequently fails to resolve and the lesion assumes the characters of a chronic pneumonia.

The part which *Bacillus influenzae* has in the production of bronchopneumonia is of great interest. This micro-organism is demonstrable by cultures in at least three-fourths of all instances of bronchopneumonia but is obtained from the inflamed lung tissue in less than half. In no instance of pneumonia has *B. influenzae* been found unassociated with other micro-organisms, whereas repeatedly pneumococci have been the only micro-organism demonstrable in the lung and very frequently the only organism present in the blood. In view of the difficulty of demonstrating *B. influenzae* in plates overgrown by other bacteria it is probable that its incidence in the bronchi is much higher, if it is not constantly present, whereas its isolation from the lung is in part referable to its presence in the small bronchi where it can be readily demonstrated by cultures or by microscopic preparations. We have been almost uniformly unsuccessful in demonstrating the micro-organism in the alveoli of the lung.

Suppurative pneumonia referable to hemolytic streptococci is of two types which are readily separable by their anatomic characters: (a) One or several abscesses situated below the pleura and accompanied by empyema. (b) Interstitial suppurative pneumonia is a lesion not infrequently found in association with influenza and rarely, if ever, seen in its absence.

Abscesses produced by staphylococci differ in anatomic characters and sequelae from those caused by hemolytic streptococci. Small abscesses occur in one or several localized clusters; these abscesses are grouped about a bronchus and have their origin in its terminal branches.



Bronchiectasis has been frequently found as a sequela of the severe bronchitis of influenza. Infection of the bronchi by *B. influenzae*, accompanied by a variety of other micro-organisms, notably hemolytic streptococci and staphylococci, has caused profound changes in the bronchial wall beginning with destruction of the epithelial surface and followed by necrosis penetrating partially or completely through the wall and occasionally extending into the surrounding alveolar tissue.

Unresolved lobar pneumonia has not been recognized among instances of pneumonia following influenza but unresolved bronchopneumonia is of frequent occurrence and has well definable gross and microscopic characters.

#### DISCUSSION

DR. DOCK: This has been a most valuable and important demonstration. One can see that we have here an unusually complete and carefully selected set of specimens giving a complete study of the pathology of certain kinds of pneumonia. As to the interstitial inflammation I recall very well a case in Germany several years before the epidemic of 1889-1890; the same condition was found there and it was spoken of as lymphangitis pulmonum. Those who have been studying the cases of pneumonia in the ward can see here the relations of the anatomic changes and physical signs. We have not been able to see the specimens as the few that died could not furnish necropsies, but if those working in the ward will study these specimens they will find many explanations of diagnostic problems.

DR. KINSELLA: I was very much interested in the fact that the hemolytic streptococcus infections occurred in the early part of this epidemic (reported by Dr. Opie). I think that was due to local conditions because I noticed that in the camps where I worked the hemolytic streptococcus infections came toward the end of the epidemic. This year, in one part of the hospital, in the male section, there were forty cases which we studied in the beginning of the epidemic, without finding any hemolytic streptococcus. In the last week, in one of the female wards, there has been a slight outbreak of empyema with hemolytic streptococcus. Survey of that ward showed hemolytic streptococcus in 25 per cent. of the cases.

DR. GRAHAM: I think Dr. Opie deserves to be very much congratulated on this splendid presentation of the pathology of this condition. His illustrated explanation of the development of bronchiectasis has been particularly interesting. He has likened the production of bronchiectasis to the production of an aneurism. Of course, to have rupture of the wall, it is necessary to have pressure from within or else a pull from without. When one considers what may produce sufficient amount of pressure from within to cause a rupture of the bronchus and establish a bronchiectasis, one should think of coughing as an important factor, at least if pressure relationships have been so altered (as by open drainage in a case of empyema) as to make the pressure during the act of coughing less outside than inside the bronchiole. Sufficient pull from without to rupture a diseased bronchus could theoretically be imagined to result from suction too strongly applied in cases of empyema. The danger, therefore, of injudicious suction on these cases is apparent. Another thing, particularly interesting, is the very easy explanation one gets from these lantern slides, as well as from the appearance of the lungs, why it is that these people had a tendency to show a low vital capacity. It is easy to see that it would be difficult to inflate their lungs properly. It is very apparent that their vital capacities would be low, and therefore that open drainage during the acute pneumonic stage of the illness would be very dangerous.

DR. SINGER: Just a few remarks in regard to the fibrosis of the lungs in these pneumonia cases and the fibrosis we see in tuberculosis. Since the last epidemic we have found so many of these lungs show evidence that we have hesitated in a large number of cases to call them tuberculosis. You can readily see from the illustrations on microscopic sections that for some time to come the roentgen ray will be a source of doubt without other findings.

#### HENRY COUNTY MEDICAL SOCIETY

The Henry County Medical Society met in regular session in High School Building at Clinton, Wednesday, March 24, 1920, and was called to order by President Will P. Bradley at 2 p. m. Present with president and secretary were: Drs. S. A. Poague, C. W. Head, J. H. Walton, R. J. Jennings, J. R. Wallis, N. I. Stebbins, B. B. Barr, E. C. Peelor, J. J. Russell, S. W. Woltzen and J. H. Wolf. Visitors, Drs. Logan Clendening and H. P. Kuhn of Kansas City. The minutes of previous meeting were read and approved.

Dr. Clendening gave an excellent lecture on "Forms of Chronic Lung Disease," illustrated by lantern slides, giving the results of his experience in army, camp, and hospital work, that was very interesting and instructive to all present, especially the talks on fluid in the plural cavity, how to treat it and reasons why. Dr. Walton's discussion was by praise and commendation.

Dr. Peelor presented a case, a girl of 14 years, with a depression of the lower end of sternal bone.

Dr. Kuhn showed some pictures of fractures of wrist, leg, and ankle, gave reasons why the true import was not recognized, and why the failure to get true mobility and the resulting tire on use of the parts. All could and did appreciate his instructive talk. A vote of thanks was given to Drs. Clendening and Kuhn in a manner that showed the talks were well thought of.

Dr. Woltzen showed roentgen-ray plates of a girl of 5 years who entered the hospital with abscess of stomach. Dr. Stebbins operated and found an iron staple 2½ inches long which was removed. The staple was shown. The opening closed nicely.

F. M. DOUGLASS, M.D., Secretary.

#### JACKSON COUNTY MEDICAL SOCIETY

The eleventh regular meeting of the society was held Tuesday, March 16. The meeting was called to order by the vice president, Dr. G. E. Bellows, and the reading of the minutes of the previous meeting was postponed.

Dr. Malcolm A. Bliss, St. Louis, outlined the work that is being done by the National Association of Mental Hygiene, in the survey of the institutions, asylums and jails of the state. Dr. Bliss urged that every effort be made to eliminate all politics in the appointment of officials of these institutions.

The scientific program consisted of a talk by Dr. P. T. Bohan on "Symptoms and Signs of Cardiac Failure," and Dr. P. M. Krall showed electrocardiograms of cardiac arrhythmia. These subjects were discussed by Drs. Hunt, Sam Snider, A. C. Griffith, Child, Bliss and Clendening.

Attendance 65.

PAUL V. WOOLLEY, M.D., Secretary.

#### MARION COUNTY MEDICAL SOCIETY

The regular meeting of Marion County Medical Society was held at 8 p. m., April 2, 1920, at Hannibal, the president, Dr. Hardesty, in the chair. Others present were: Drs. Hornback, Baskett, Bourn, Far-

rell, Chilton, Howell, Banks, Waldo, Hays, Birnie, and Ross.

Dr. Bourn reported several interesting cases: one a fetal monstrosity with a complete skull and extra parietal bones, still-born. Another with many bones fractured in utero that lived half an hour. Another case had what appeared to be acute appendicitis but proved to be hemorrhage from vessels at the base of the appendix into the abdominal cavity.

Dr. Banks reported severely infected fingers in a man over seventy, with temperature 104 degrees.

MARY S. ROSS, M.D., Secretary

#### PEMISCOT COUNTY MEDICAL SOCIETY

Pemiscot County Medical Society met in the Hall of Commerce in Caruthersville, Tuesday, April 13, 2 p. m., with the following members present: Drs. Pinion, W. H. Denton, Johnson, Hudgings, Phipps, Collins, Grainger, Robbins, Brannon, Luten, Hall and Cooper; and Dr. Mason of Steele, a visitor.

Dr. J. R. Pinion called the meeting to order, and two very interesting papers were read, one being on the subject of nephritis by Dr. W. H. Denton, the other on trench mouth by Dr. G. W. Phipps. Both papers were highly enjoyed by all and discussed by several members.

At the last meeting a committee was appointed to revise the fee bill. The committee reported and after much discussion an entirely new fee was made which seemed to please all present.

The application of Dr. J. C. Faris for membership was passed on favorably by the censors.

The meeting was one of the best we have had in some time and I think interest is again on the rise with us.

L. E. COOPER, M.D., Secretary.

#### ST. LOUIS COUNTY MEDICAL SOCIETY

The society met at Clayton, April 14, and was called to order at 8:30 p. m. by the president, Dr. J. A. Prichard. Present: Drs. Prichard, Eggers, Sudduth, Koch, Dunnivant, Cape, Dunn, Conway, Brossard, Sutter, Townsend, Reynolds. Visitor, Dr. Harrington.

The application of Dr. Irene M. Blanchard of Webster Groves was received with the favorable report of the board of censors and she was received into the membership of the society.

A communication from the State Board of Health was read announcing that Dr. George Rasch of New York City would lecture to the society, if desired, on "Immunology and Its Relation to Vaccine Therapy." The letter was ordered filed.

Drs. Eggers and Conway gave short accounts of their attendance at the recent meeting of the State Medical Association at Jefferson City.

Dr. Eggers read a most interesting paper on public health matters in St. Louis County. This paper brought out a general discussion which will certainly result in benefit to the public health service in the county.

A. CONWAY, M.D., Secretary.

#### WRIGHT-DOUGLAS COUNTY MEDICAL SOCIETY

The regular meeting of the Wright-Douglas County Medical Society was held Thursday afternoon, March 18, in the office of Dr. J. M. Hubbard at Mountain Grove. Dr. J. A. Fuson, the president, was in the chair, and the following members present: J. M. Hubbard, H. U. Daugherty, E. C. Wittwer, and A. C. Ames of Mountain Grove; J. A. Fuson of Mansfield, L. T. VanNoy of Norwood, and B. E. Latimer of Hartsville. The following visitors were present: F. B. Daily and J. R. Talley of Mountain Grove, J. P.

Cavalier of Elk Creek, and Wallis Smith of Springfield. C. M. England of Mountain Grove, an honorary member, was also present. J. W. Bingham of West Plains arrived after the meeting adjourned.

Dr. E. C. Wittwer read a very good paper on "Bronchopneumonia," which was discussed by most of those present and appreciated by all. Dr. Wallis Smith read a very instructive paper on "The Pathology and Surgical Treatment of Goiter," in which he emphasized the fact that not all goiters are suitable cases for operation, some being better treated by medical means.

A resolution which was left over from last meeting was discussed and passed, to the effect that members of the society should refuse to render services to anyone who sues one of our members who has tried to render faithful services, and thus attempt to obtain damages.

The application of J. R. Talley for membership was presented and favorably received and the secretary authorized to cast the ballot of the society for his election.

After adjournment most of those present repaired to the Sorick Cafe where a banquet was served, after which all went to their homes feeling that we had enjoyed a pleasant afternoon, even though the day had been bad and the weather and the press of duties had kept several away who would otherwise have been present.

A. C. AMES, M.D., Secretary.

### BOOK REVIEWS

**INDUSTRIAL MEDICINE AND SURGERY.** By Harry E. Mock, M.D., F.A.C.S., Assistant Professor of Industrial Medicine and Surgery at Rush Medical College. Octavo volume of 846 pages with 210 illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, \$10 net.

Many books have been written on war surgery. These cover the subjects of the selection of recruits or drafted men; of the treatment of those with minor physical disability to make them good soldiers; of the prevention and cure of medical diseases; of the care of wounded men in all stages; and finally, with the problem of reconstruction.

This book deals with the industrial army, vastly larger and with many more casualties. In 1917 the government report shows 28,000 deaths; 875,000 casualties requiring more than one month for recovery. Of these, 4,000 lost a limb, or the hand or foot; 5,700 lost the sight of one eye; 59,000 lost one or more fingers. It is estimated that 3,000,000 workmen are disabled every year by accident or disease; of these 800,000 should be physically reconstructed and 200,000 vocationally retrained.

Within the covers of one large volume all the above problems of the army of workers are considered from the broadest principles to the most minute details. The author brings to his task a wide experience, gained as head of the medical department of Sears, Roebuck and Company of Chicago. He shows an enlightening familiarity with the medical and welfare work of many other American corporations, both large and small.

The writer sets forth as the first task of industrial surgery, these four problems: "How to aid recovery the quickest," "How to prevent permanent disability," "How to avoid a fatal termination," "How to prevent a recurrence of the accident."

He lays great stress on the quality of the doctor, holding that "cheap surgery gives poor results." Every detail of equipment, first aid squads, visiting nurse and social service, is set forth at length, but the



doctor is pointed out as the vital factor of the whole machine.

The chapter on fractures is worth the price of the whole book. The reviewer, being an orthopedic surgeon, has a considerable familiarity with the literature of this department and makes bold to say that he knows no better résumé of up-to-date treatment of fractures than is found in this book.

Hand infections are well discussed. The author makes clear the great advantage of early hospital treatment with immobilization and the application of heat. The average number of days of disability is shown to be much less in the hospital cases than in those treated at the office and allowed to go home.

It is clearly shown that individuals with infected tonsils and teeth are much more prone to severe infections from slight puncture wounds to the hands than those without local foci of infection. A general clean-up of mouths and throats in a large group of employees is followed by a much smaller percentage of severe infections following traumata in the succeeding years.

The prompt application of iodine to all wounds is advocated. The best results are obtained where iodine applicators and gauze pads are conveniently at hand in every department and are used immediately. The individual is then obliged to report to the doctor or nurse at once, however trifling the injury.

There are excellent chapters on the estimation of compensation, on health and accident insurance, and on the Americanization of the recent immigrant or the hyphenated citizen.

Most physicians will find this book of distinct value even if they are not directly engaged in industrial medicine or surgery. R. M. S.

THE OXFORD MEDICINE. Advance Pages. Volume 1, Part 5. Edited by Henry A. Christian and Sir James Mackenzie. New York: Oxford University Press. American Branch, 35 West 32d Street.

In this fasciculus Dr. Barker of Johns Hopkins discusses the philosophy of diagnosis and the type of preclinical study best fitted to train a diagnostician. He discusses group medicine and outlines the principles on which it should be developed. Dr. Christian gives a brief summary of functional tests, Dr. Peabody (a pupil of Christian's) outlines the principles of the study of respiration, and Dr. DuBois gives an outline sketch of calorimetry.

Your reviewer is struck by the philosophical and academic attitude of these essays. He cannot but feel that they will be of use chiefly to the medical educator, and of little or no value to the rank and file of practitioners. But to the scientist and to the sociologist reading up medical theory they will be of great use for reference. G. H. H.

THE PRINCIPLES AND PRACTICE OF ROENTGENOLOGICAL TECHNIQUE. By I. Seth Hirsch, M.D., Director Roentgen-Ray Departments, Bellevue, Fordham, Harlam and Gouverneur Hospitals, New York City. With 343 illustrations and 22 tables. New York: American X-Ray Publishing Company, 127 West Twenty-Sixth Street, 1920.

This splendid book contains many items too often overlooked in textbooks; it seems to omit no important factor in roentgen practice. For instance, in no other place in the English language is there so complete a description of Christen's half-value absorption theory, and the pages on the focal point tests are extremely valuable in the practical classification of tubes for daily use.

The first ninety-three pages are taken up with descriptions of apparatus and the theory of the production and application of the roentgen ray. Then follow fifty pages on fluoroscopy, radiography, radiographic methods, the silver bromide plate, postures

and positions. The standard positions take up another fifty pages and are profusely illustrated with diagrams, photographs, anatomical cuts and radiographs. This chapter is much on the order of that excellent textbook in another language by Grashey.

Chapter 18 is devoted to the exposure, under the headings of Ray Quality, Ray Quantity, Tube-Plate Distance, Focal Spot, Timing, Thickness of Part, Sensitiveness of Plate. It is confidently asserted that the careful analysis of this chapter will increase the radiographic values of the most expert technician.

The last chapter on the management and direction of roentgen-ray laboratories has probably never been presented with such a wealth of knowledge and experience. The author has organized and developed and maintained for a goodly period of years probably the largest roentgen service in the world, that of the metropolitan hospitals of Greater New York. It is a rare opportunity to be able to obtain the benefits of this experience in book form. E. H. S.

POPE'S MANUAL OF NURSING PROCEDURE. By Amy E. Pope, formerly Instructor in the School of Nursing, Presbyterian Hospital, New York, Visiting Instructor, San Francisco. New York and London: G. P. Putnam's Sons; The Knickerbocker Press, 1919.

This manual, being closely adapted to the standard curriculum for nurses, will be invaluable to the instructor in practical nursing, to the pupil, and the graduate nurse. The arrangement of subject matter is logical for class work, presenting briefly, yet comprehensively, the underlying principles, equipment, and technique for all important nursing procedures. The illustrations of apparatus and method also aid materially in giving a clear understanding of the subject. Altogether, nurses in any way connected with the care of the patient will find Miss Pope's Manual of great value. H. F.

SEX ATTRACTION. By Victor C. Vaughan, Sc.D., M.D., LL.D. St. Louis: C. V. Mosby Company.

This brochure of 44 pages covers in a clear, concise lecture form way, the principles of sex knowledge, such as might be placed in the hands of school teachers and for which class the lecture was originally prepared. Beginning with sufficient biological consideration to make the evolution of sex understandable, one is carried on through the nature of sex activity, the abnormal being somewhat touched on, and the dangers of venereal disease emphasized. The short presentation of the subject covers well the objects as proposed in the preface. F. M. B.

SYMPTOMS OF VISCERAL DISEASE. A Study of the Vegetative System in Its Relationship to Clinical Medicine. By Francis Marion Pottenger, A.M., M.D., LL.D. With 86 text illustrations and 9 color plates. St. Louis: C. V. Mosby Company, 1919. Price, \$4.

In this monograph an attempt is made to interpret, so far as may be possible in terms of visceral neurology, symptoms which are found in the every day clinical observation of visceral disease. It is a study of visceral disease, not from the standpoint of the disease process, important as that is, but from the no less important standpoint of the patient who has the disease. It is an attempt to show how pathologic changes in one organ affect other organs and the organism as a whole, through the medium of the visceral nerves. In contradistinction to the usual treatment of disease processes in their pathologic anatomic relationships, this is a study in pathologic physiology. It is largely a discussion of "viscero-genic" reflexes; and, as such, involves a somewhat careful consideration of the problems connected with the vegetative nervous system.

While the importance of the vegetative nervous system has long been known to physiologists, clinicians generally have ignored it and failed to see its intimate relationship to clinical medicine; yet it is the key which unlocks the door to many of the secrets of visceral activity. An understanding of the vegetative nervous system and the activities of the endocrine glands will explain to the clinician most of the physical acts connected with visceral function and furnish the bridge between the pathologic changes in tissues and the expression of the disease in altered organic function. In other words, the vegetative nerves and the products of the endocrine glands are the mediums through which visceral symptoms are expressed.

The study of the vegetative nervous system here presented is brief; at the same time it is sufficiently complete to furnish the essential facts which one should have in order to understand the manner in which the body activities, both physiologic and pathologic, express themselves through it. This brief presentation of the subject fills a definite need and should help to popularize the subject among medical men.

A. E. T.

**ORTHOPEDIC AND RECONSTRUCTION SURGERY, INDUSTRIAL AND CIVILIAN.** By Fred H. Albee, M.D., F.A.C.S., Professor and Director of Department of Orthopedic Surgery at the New York Post-Graduate Medical School and at the University of Vermont. Octavo volume of 1138 pages, with 804 illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, \$11 net.

This modern surgical treatise introduces into the more formal teachings of accepted orthopedic practice the imaginative factor not to be found in other current works. The operations described, while practical, are a far step from those favored by the older school of "Bloodless Surgery."

The book is extremely well arranged; the bibliography is extensive; illustrations numerous and well reproduced and the text exceptionally well written and logical in arrangement.

The work should appeal to the general surgeon of large practice and mechanical bent, but much of the technic described should not be attempted by the novice.

The chapters on reconstruction are naturally of vital interest at this time, and contain much of interest to surgeons and neurologists as well as to orthopedic specialists.

W. W. H.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of *New and Nonofficial Remedies*, 1920, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**ANESTHESIN-CALCO.**—A brand of benzocaine complying with the N. N. R. standards (see *New and Nonofficial Remedies*, 1920, p. 33). Calco Chemical Company, Boundbrook, N. J.

**GNONOCOCCUS VACCINE (POLYVALENT) (GILLILAND).**—A gonococcus vaccine (see *New and Nonofficial Remedies*, 1920, p. 283) prepared from a number of strains of *M. gonorrhoea* Neisser. Marketed in packages of four syringes containing, respectively, 250, 500, 1,000 and 2,000 million killed gonococci; also in packages of four 1 Cc. ampules containing, respectively, 250, 500, 1,000 and 2,000 million killed gonococci. The Gilliland Laboratories, Ambler, Pa.

**OVARIAN RESIDUE-HOLLISTER-WILSON.**—The residue from the fresh ovary of the hog, after the ablation of the corpus luteum. It is used for the same conditions as the entire ovarian substance (see *New and Nonofficial Remedies*, 1920, p. 201) but is claimed to be somewhat more stable. Hollister-Wilson Laboratories, Chicago (*Jour. A. M. A.*, March 6, 1920, p. 675).

**PHENACAINE.**—Holocaine hydrochloride. The hydrochloride of phenetidyl-acetphenetidine, a basic condensation product of parphenetidine and acetparphenetidine. Phenacaine was first introduced as holocaine hydrochloride. It is a local anesthetic like cocaine, but having the advantage of a quicker effect and an antiseptic action. Five minims of a 1 per cent. solution when instilled into the eye are usually sufficient to cause anesthesia in from one to ten minutes.

**PHENACAINE-WERNER.**—A brand of phenacaine complying with the N. N. R. standards. Werner Drug and Chemical Company, Cincinnati, Ohio (*Jour. A. M. A.*, March 27, 1920, p. 889).

### PROPAGANDA FOR REFORM

**GREEN'S DROPSY REMEDY.**—This "treatment" is sold on the mail order plan and comes in the form of large balls or boluses, some smaller balls or boluses and, in some cases, includes "Tonic Tablets." The balls are taken, followed by substantial doses of magnesium sulphate. The A. M. A. Chemical Laboratory reports that the boluses, large and small, appear to contain powdered squill as their chief medicinal ingredient. The laboratory further reports that the "Tonic Tablets" contain an iron salt, probably dried ferrous sulphate, as the chief medicinal ingredient. Obviously, there must be no small amount of danger for a person in a dropsical condition to dose and drastically purge himself. The product is one that has no legitimate place among home remedies (*Jour. A. M. A.*, March 6, 1920, p. 689).

**STANNOXYL.**—On the assumption that tin workers were less troubled with boils than the average person, two French investigators proposed the use of tin compounds in the treatment of staphylococcus infections. Based on their work, a proprietary preparation—StannoxyL—has been placed on the market with the claim that it is "composed of stannous oxid and specially purified metallic tin." Absurdly extravagant and unwarranted claims are made for the product (*Jour. A. M. A.*, March 6, 1920, p. 692).

**HEPATOLA.**—This was declared a fraud by the federal authorities in 1917, and the Hepatola Company was denied the use of the United States mails. It is still being sold in Canada. Hepatola is one of the many treatments claimed to remove gallstones. Analysis showed Hepatola to be the same old gallstone trick—that of giving the patient a large dose of some bland oil and following it up with a saline. The soapy concretions that are voided following this dosing are the "gallstones." Hepatola is essentially the same as "Fruitola" and "Mayr's Wonderful Stomach Remedy" (*Jour. A. M. A.*, March 13, 1920, p. 752).

**MORE MISBRANDED DRUGS.**—Boericke and Runyon's santonin and calomel tablets, acetanilid and quinin compound tablets, potassium iodid tablets, and morphin sulphate tablets did not contain the claimed amount of drug, and some aspirin tablets contained no aspirin. Sulferro-Sol was falsely claimed to cure pellagra, dyspepsia, indigestion, etc. Santal Pepsin Capsules was falsely claimed to be a specific for all bladder trouble, gonorrhea, gleet, inflammation of the ovaries, rheumatism, Bright's disease and a number of other conditions (*Jour. A. M. A.*, March 20, 1920, p. 818).

(Concluded on Adv. page xvii)



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Chairman—Willard Bartlett, St. Louis; W. K. Trimble, Kansas City; R. L. Thompson, St. Louis

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**Revision of Constitution and By-Laws**

Chairman—M. P. Overholser, Harrisonville; O. B. Hall, Warrensburg; Martin Yates, Fulton; T. W. Cotton, Van Buren; H. A. May, Washington

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Chairman—F. R. Anthony, Maryville; H. S. Crawford, Harrisonville; H. P. Kuhn, Kansas City; T. J. Downing, New London; J. D. Seba, Bland; Mary S. Ross, Hannibal; T. J. Rigdon, Kennett

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\* Counties in italics are not organized.





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#### States Reciprocating with Missouri (Corrected to July 1, 1919)

Reciprocity on the basis of examination only exists between Missouri and the following states: Arkansas, California, Illinois, Kansas, Louisiana, Mississippi, Nebraska, North Dakota, Oklahoma, Pennsylvania, South Carolina, Texas, Virginia and Wisconsin.

It is required of an applicant coming from Illinois that he shall have been licensed in that state on a date since Jan. 1, 1907; from Oklahoma on a date since Jan. 14, 1911. In the other above named states we require that an applicant shall have been licensed on examination on a date since June 1, 1901.

Reciprocity on a basis of diploma or examination exists between Missouri and the following states: Alabama, Colorado, District of Columbia, Georgia, Indiana, Iowa, Kentucky, Maine, Maryland, Michigan, Minnesota, Nevada, New Hampshire, Ohio, Utah, Vermont, Washington and West Virginia.

We require of those licensed on diploma only that they shall have been so licensed prior to June 1, 1901.

Those licensed on a date since June 1, 1901, in the states with which we reciprocate on both qualifications, shall have been licensed on both diploma and examination.

One year's practice in a reciprocating state is required of all applicants.

Membership in a County, District or National Medical Society is also required.

It is required that all applicants shall be graduates of medical colleges accredited in Missouri at the time of graduation.

Applicants for a certificate on the basis of reciprocity must make formal application on a blank provided by the Missouri State Board of Health.

In sending application to this office it must be accompanied by diploma of graduation, the original certificate issued by the reciprocating state, and the fee, which is twenty-five (\$25.00) dollars, five (\$5.00) dollars of which is the filing fee and not returnable.

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OF THE

## Missouri State Medical Association

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(Continued from page 220)

**PLATT'S CHLORIDES.**—The Council on Pharmacy and Chemistry reports that Platt's Chlorides is inadmissible to New and Nonofficial Remedies because its composition is uncertain and indefinite, and because the claims made for it are exaggerated and misleading. The A. M. A. Chemical Laboratory analyzed a specimen purchased in 1911 and one purchased in 1919, and reports that while both contain aluminum salt and zinc chlorid, they differ considerably in composition and the latter contains a very small amount of mercuric chlorid. In the past, the advertising for Platt's Chlorides has suggested more or less directly that, as chlorinated lime (bleaching powder) may be made to give off chlorin gas which disinfects, so the air in a room may be disinfected by evaporating Platt's Chlorides. From the analysis of Platt's Chlorides it is evident that when the preparation is evaporated under ordinary conditions, only water vapor escapes. Whatever disinfecting or germicidal action the preparation may possess is exercised only when the solution is brought in direct contact with the substance to be disinfected. The aluminum and zinc salts present may be useful as deodorants, but they are not effective as germicides. The small amount of mercuric chlorid is hardly to be considered as materially increasing its efficiency (*Jour. A. M. A.*, March 27, 1920, p. 903).

## BOOKS RECEIVED

Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

**ANATOMICAL DIAGRAMS FOR THE USE OF ART STUDENTS.** By James M. Dunlop, A.R.C.A., Antique and Life Class Master and Lecturer on Artistic Anatomy in The Glasgow School of Art. With introductory preface by John Cleland, M.D., LL.D., F.R.S., Professor of Anatomy in the University of Glasgow. Fourth Edition. London: G. Bell and Sons, Ltd., 1918.

**THE SURGICAL CLINICS OF CHICAGO.** February, 1920. Volume 4, No. 1; with 83 illustrations. Philadelphia and London: W. B. Saunders Company.

**THE MEDICAL CLINICS OF NORTH AMERICA.** January, 1920. Philadelphia and London: W. B. Saunders Company.

**A LABORATORY MANUAL OF PHYSIOLOGICAL CHEMISTRY.** By Elbert W. Rockwood, M.D., Ph.D., Professor of Chemistry and Toxicology and Head of the Department of Chemistry in the University of Iowa. Fourth Edition. Revised and Enlarged. Illustrated with one colored plate, three plates of microscopic preparations and seventeen engravings. Philadelphia: F. A. Davis Company, 1919. Price, \$2 net.

**LABORATORY MANUAL OF PHARMACOLOGY.** Including Materia Medica, Pharmacopoeics and Pharmacodynamics. By A. D. Bush, B.Sc., M.D., Professor of Pharmacology, University of North Dakota. Illustrated with full page plates, many in colors. Philadelphia: F. A. Davis Company, 1919. Price, \$3.50 net.

**THE JOURNAL OF DENTAL RESEARCH.** December, 1919. (The Journal of Dental Research, Inc.) New York City.

**HENRY MILLS HURD.** The First Superintendent of The Johns Hopkins Hospital. By Thomas Stephen Cullen. Baltimore: The Johns Hopkins Press, 1920. Price, \$1.50.

**THE PRINCIPLES AND PRACTICE OF ROENTGENOLOGICAL TECHNIQUE.** By I. Seth Hirsch, M.D., Director Roentgen-Ray Departments Bellevue, Fordham, Harlem and Gouverneur Hospitals, New York City. With 343 illus-

(Concluded on p. xxiv)

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                  } M. A. BLISS, M.D.

### ORIGINAL ARTICLES

#### INFLUENCE OF THE MEDICAL PROFESSION\*

PRESIDENT'S ADDRESS

N. P. WOOD, M.D.  
INDEPENDENCE

Contemporaneous with the growth of civilization is the development of medicine. The study of medicine has come down the ages, gradually gathering scientific facts and broader thought with each successive century, until today it is rich in facts and acts. In the very early days disease was thought of as a punishment sent on the people by the gods. It was considered sacriligious to do anything but accept it. As early as the Pharaohs, because of the almost unceasing warfare, we find surgery forcing itself on the people. There are instances cited of amputations, removal of cataracts, extraction of foreign bodies, and dressing of wounds; also we note the probable use of purgatives and emetics.

The progress of medicine was greatly hampered by ignorance and superstition; thus we can easily understand that little advancement was made for ages. Hippocrates, "the father of rational medicine," was the first to recognize the benefit of clinical observation. While at this time the people were proficient in mechanical art and construction, there had been little progress in medicine, which may be accounted for by the ignorance of anatomy, analytical chemistry and biology. Hippocrates' skill was recognized and sought by the people of all classes. Up to this time there had been scarcely anything written on medicine; but because of his rather voluminous writings he has been given the appellation of the "father of medical literature." It was he who gave medicine an independent standing—no longer was the priest and the physician the same. We note the lapse of several centuries before any noticeable advance-

ment was made. Galen stands as a pioneer physiologist; he gave us the first accurate description of the cavities of the head, chest and abdomen (131 A.D.), described the contraction of muscles, the action of motor nerves and gave the differentiation of tendons and nerves. Oribasius in 326 A.D. is accredited with having described syphilis and gonorrhea. In 363 A.D. was the beginning of the system of hospitals in Jerusalem. Following these achievements was another long period of little progress. It is recorded that through this period plagues, small-pox, and other contagious diseases prevailed with little or no abatement.

In the sixteenth century came Harvey with his discovery of the circulation in the human body, which opened the way for the study of physiology, while we are indebted to Ambroise Paré for the ligation of bleeding vessels. Then came McDowell, a hundred years ago, who invaded the sacred confines of the peritoneum; and later Morris with anesthesia, Lister and Pasteur with antisepsis. We point with pride to Koch, Finlay, Behring, Klebs, Loeffler, the yellow fever commission, Osler, and others who have enthroned their names in the hearts of the people by their immortal achievements. The microscope, the roentgen ray, the chemical and pathologic laboratories together with clinical and postmortem study have extended the horizon of medicine and given the profession a more accurate knowledge of etiology, pathology, diagnosis and therapeutics, and thus laid the foundation for the most rapid progress and unusual achievements in the history of medicine.

The late war with all its darkness and calamity has given the greatest clinic the world has ever known and together with its almost unlimited data has made it possible for the greatest decade of medical progress. After the people recognized medicine as a science, rather than as a part of their religion, advancement was made possible. Superstition and ignorance gave way to the gradual dawn of scientific light. As a result of the labors of these luminaries of medical and collateral sciences we have a knowledge of the almost innumerable diseases affecting the human race, many of which are doubtless the

\*Read at the Sixty-Third Annual Meeting of the Missouri State Medical Association, Jefferson City, April 6-8, 1920.

product of advancing civilization. It is now for the medical profession to produce a specific in the treatment or prevention of these various diseases. It is a deplorable fact that, except the people killed by accident, surprisingly few live to the sublime moment when senility calls the end. There are 800,000 people dying each year and 4,000,000 ill annually in the United States from infectious diseases. Besides the anguish of soul, the loss of life and production, come the millions of dollars that disease and death cost this country each year. The fact that this unfortunate condition exists, and in my opinion it is entirely within the realms of the possible to correct under proper conditions, ought to serve as a stimulus not only to the profession but also to the entire country to reduce the morbidity and the mortality to a minimum. Not until the medical profession has done away with this lamentable condition will it have fulfilled its obligation to the world and reached the zenith of its glory.

We will not overlook prophylaxis which has probably done most for the longevity of the human race. While sanitation reaches back beyond the Christian era, it remained for advancing scientific study to unfold the glorious facts of medicine, pathology, therapeutics and prophylaxis. Pompeii established a sewerage system and Moses gave a code of sanitation in which there were specific directions regarding the burial of the dead, the preparation of food, the slaughter of animals, regulations on marriage, diagnosis and isolation of leprosy and other contagious diseases. Sanitation made gradual progress for many years until the fearless Riis pointed out the unsanitary conditions in New York City and by his bold public utterances and teaching finally attracted the attention of the people to the tenement buildings which he was pleased to call "death holes," into which the sun had never shown and fresh air was unknown; where 60 per cent. of the babies born died before they were a year old. These "death holes" were soon replaced by buildings in which the God-given boon of fresh air and sunshine had free play, thereby reducing the infant mortality to 15 per cent. The yellow fever commission, composed of Major Walter Reed, Dr. James Carroll, Dr. A. R. Agramonte, Dr. Jesse Lazear, went quietly into the "valley of death" and soon found the mosquito that caused the death of millions of people, not only in Cuba but in our Southland and in other countries. In order that he might remove every question from the minds of the doubting Thomases, young Lazear bared his arm and permitted an infected mosquito to inject the yellow fever poison into his system, from which he promptly died. No greater sacrifice is recorded in the pages of history and yet I am told that a very humble grave marks his resting place. It seems to me, gentlemen, that our government should

erect at his grave a monument so tall that it would bathe its summit in the very battlements of heaven, and place on it this immortal scroll: "Here lies earth's greatest benefactor, who sacrificed his life on the altar of science for the benefit of humanity."

The marvelous improvement in camp sanitation is easily noted by the comparison of the camps in the recent war with our own camps of only a short time ago, when we had our little affair with Spain; then fourteen men died of disease to one in battle. The modern camp life had better sanitation than is usually found in civil life. Except for the pestilence of influenza, the morbidity and mortality was practically nil.

Through the application of these sanitary facts a broad field has been opened and has brought incalculable benediction to the civilized world. It has relegated cholera, yellow fever, and bubonic plague to the pages of past history. It has taken away from diphtheria its terror and has made smallpox and typhoid fever inexcusable pestilences. It has illuminated the way to prevent infectious and contagious diseases, and has led the world into the dawning of that glorious day when all infections and contagions will be eliminated from the nomenclature of medicine.

There are difficulties for the profession to overcome in attaining our ends. While ignorance and superstition have been overcome we still have quackery in its various forms; patent nostrums, which have done more in forming the drug habit and intemperance than perhaps any other one thing; the prescribing druggist (some of whom have a pretty good clientele which they are constantly treating, especially those with venereal diseases). We have a class of one of the worst criminals parading under the cloak of medicine—the abortionists—who are constantly doing criminal operations.

In olden times the physician's opportunities were limited and his influence as a professional man was small. He had no precedent from which to reason, no basis from which to work, but now and then he would bring forth a gem of thought that is still shining in the scientific firmament and has lighted the way for others in scientific work. Many of our fundamental facts have their origin in the fertile brain of the pioneer doctor. The physicians as a class have always stood for high social and moral standards, for intellectual and physical culture; they have ever been untiring in their efforts for the uplift of humanity and the preservation of health and the longevity of the race. While they stand for the highest ideals in physical and moral realms, they have been negligent in politics. I am using the word politics in the true sense of the word, which I understand to mean scientific government. The doctors of the state and of the nation not only have the right, but



it is their imperative duty, to lend their influence in selecting legislators, both state and national, who will look more carefully to the physical welfare of the people. The united effort of the 6,000 doctors in Missouri can be a mighty power in selecting legislators who will lend a listening ear to the needs of humanity and secure legislation that will improve the health conditions, also appropriations commensurate with the cause. Let us see to it that we get at least as much appropriation for the 4,000,000 people in Missouri as will be made for agriculture, bees, cattle, hogs, etc., which has not been the case in the past.

Let us demand that all the eleemosynary institutions be taken out of the hands of partisan politics, and the four state hospitals for the insane should be at the command of the medical profession for clinical study; also the standardization of hospitals, including the politically governed city hospitals, some of which are a reflection on the profession and a disgrace to the hospital system; the erection of rural hospitals—there should be one in each councilor district, if not one in every county. We should advocate that there be additional hospitals, judiciously located over the state for the treatment of tuberculosis or liberal additions to Mount Vernon. The rural hospitals would aid materially in the postgraduate work which we hope will become a permanent auxiliary of the profession, and they will meet a need of the people. We should continue to demand higher medical education. It is to be regretted that therapeutics is being so neglected in the teaching of our medical schools; sixty hours is not enough training in pharmacology and therapeutics to give a student in medical college teaching. Rather 279 hours as given by the Jefferson Medical College is more nearly commensurate with the importance of the subject. School medical inspection should have the indorsement of organized medicine and be in every school in the state under the control and direction of an organized system. Medical inspection of school children and physical culture through both the playground and gymnasium are essential to the development of our girls and boys into the highest type of citizenship. All of these things that have been done for the health and life of the people are the result of the efforts of organized medicine. Hence the importance of a more complete organization. Let us not be satisfied until we have every eligible doctor in the state a member of the county and state societies. A few means of strengthening the medical associations are through postgraduate courses, rural hospitals, frequent visits of the councilors and president to the societies. May we hope for vigorous legislation that will bring about better health and living conditions in the states. It is a pleasing fact that our government is taking in hand these better health conditions, particularly the

crusade on venereal diseases, cancer and tuberculosis. It is earnestly hoped that every physician in the state will lend his best effort to this commendable work. Then, if we as medical men, will arise to the occasion and improve the opportunities that are ours, the time will hasten when we will realize the rich fruition of our righteous efforts.

Gentlemen, I graciously acknowledge the honor of the presidency of the Missouri State Medical Association, and sincerely thank you for your confidence and cooperation. I bespeak for the Association great success and a glorious future.

### INFLUENZA AND INFLUENZAL PNEUMONIA\*

VICTOR C. VAUGHAN, M.D.

Dean, University of Michigan Medical School

ANN ARBOR, MICH.

I always feel at home in Missouri, especially in St. Louis. What I say to you I wish to make just as practical as I possibly can. I am going to spend my fifteen minutes in talking to you about influenza and influenzal pneumonia.

It was my good fortune to be chief of the section on communicable diseases in the army. In the first place, the method of mobilization of our army was as bad as it could be, so far as infectious diseases were concerned. The men were gathered together in different localities, held for days in ordinary buildings, with clean and unclean in close contact, and then, still in their ordinary clothing, put on troop trains and sent to the various camps. The result was a great dragnet over the whole United States, bringing into the camps every disease that existed in the localities from which the troops came. I am not criticizing anybody for this. I am simply stating facts. We went into the war so hurriedly that no other method of mobilization was practicable. I remonstrated at the time, and General Gorgas was kind enough to transmit my remonstrance to the staff. I received an answer which floored me and which I had to recognize. The answer was: "The purpose of this mobilization is not to make a demonstration in preventive medicine, but to assemble and train an army as quickly as possible." I had to admit the truth of that; but if we ever have to mobilize again I hope a little more judgment will be shown.

As a result, take your own troops from this state. They were assembled in various localities, put on troop trains, and sent to Camp Funston. Every one knows that cerebrospinal meningitis has been endemic in Missouri and Kansas for a great many years. It was there-

\* Fifteen minute talk at the meeting of the St. Louis Medical Society, Dec. 16, 1919.

fore not strange or unexpected when cerebro-spinal meningitis played the important part that it did in Funston. The method suggested for mobilization was to bring the men together in groups of not more than thirty, have them barbered, washed, and sterilized, have their uniforms put on, and have their vaccines for smallpox and typhoid administered at home. They were then to be sent, not on troop trains, but in groups of not more than thirty, to the camp and there held in groups for at least fourteen days longer. If this method could have been carried out I feel confident that we would have had less of the infectious diseases in our camps.

During the winter of 1917-1918 we had a great deal of pneumonia. The one striking incident about it was that it was unevenly distributed. There were some camps with a high death rate and other camps with a very low death rate, and it was up to me to explain this. Climate had nothing to do with it because there were good camps and bad camps closely located, almost side by side, within 100, 150, or 200 miles of one another. So climate had nothing to do with it. And I may say here that, so far as the big camps were concerned, sanitation had nothing to do with it, because with one exception there was only one camp in the United States in 1917-1918 that was not in a sanitary condition; that was Camp Greene of Charlotte, N. C. If you will take a map of the United States and, instead of putting the camps where they were, put each in the center of the population from which the troops came, all the good camps would be in the same region, and the bad camps would be together. All the first-class camps with two exceptions (and they are not really exceptions) brought their soldiers from that part of the United States which lies east of the Mississippi River and north of the Ohio and Potomac. There was not a camp, wherever it may have been, that got its troops from that area that was not a first-class camp, and with a death rate during that winter lower than the death rate of the same aged group at home. Now, why? Why should all the men who came from this region have relatively escaped diseases, while those from other regions died in great number? It was not physical superiority, because the region which I mentioned furnished a smaller number of men fit for military service than other regions. Pennsylvania, for instance, had 40 per cent. of the men examined unfit for military service. Pennsylvania, with its dense and largely foreign population, had a greater number of men unfit for service, as shown by examination, than Alabama or Georgia, with their large negro population. So this was not the reason. The only explanation I have ever been able to find (and I am confident it is the true explanation) is that this area of the United States is what might be called the urban area of the country. It is the most densely populated,

and has a greater number of large cities and manufacturing establishments. Coming down to small organizations, for instance, in the Missouri National Guard at Doniphan, which had troops from all over this state and Kansas, the St. Louis troops (I forget the number of regiments) had a low death rate, while those from rural districts had a high rate. There is only one explanation, and that is that men from cities had already, before they went to camps, been subjected to those germs which caused the acute respiratory diseases and had acquired a certain degree of immunity. If there is any other better explanation I shall be glad to have it, but this is the only one I can think of. The rural soldier died in larger number than the urban soldier from acute respiratory disease. The Southern soldier died more numerously than the Northern soldier. Why? This was true because the South is rural to a larger extent than the North. I have published the diagram showing the percentage of death rate compared with the percentage of rural soldiers in the various camps. The two lines run parallel. The higher the rural percentage of soldiers in the camps the higher the death rate. This was not only true during our own war but on going back to the Civil War I found that the acute respiratory diseases played a much greater part in the Confederate Army than in the Federal Army. The death rate from pneumonia among the Confederate troops was nearly three times that among the Union troops, and the sick rate from the respiratory diseases was correspondingly higher. It was found absolutely necessary, as you will find from reading the medical and surgical history of the War of Rebellion, to disband companies and regiments in the Confederate Army and send them back home to recover from measles, pneumonia, and various other acute respiratory diseases.

With the spring of 1918 most of these Divisions began to move to France, and the camps were filled with new troops. Beginning at that time, it was not longer possible to tell where the soldier in any one camp came from. Instead of sending all the Missouri soldiers to Funston or Doniphan, many were sent to engineering camps, to light and heavy artillery camps, etc. We had influenza in a number of camps in the spring of 1918, and the influenza that prevailed in the spring of 1918 gave immunity, to a certain degree at least, to the severer forms of influenza that occurred in the fall of 1918. Therefore, it must have been the same disease.

Time will not permit me to go into detail concerning this disease. I shall mention just one instance. At Camp Shelby, at Hattiesburg, Miss., there was located the only Division in the United States which did not move on its way to France early in 1918, that is before the first of July. On April 7, 1918, influenza struck



Camp Shelby. The testimony of the medical officers there (and it was worked up thoroughly) left no doubt that it was influenza. There were 26,000 soldiers who had been in that camp since the fall (October and November) of 1917. They were therefore relatively seasoned troops, and on April 7, 1918, influenza struck that camp in its characteristic way, coming like a whirlwind out of a clear sky. Within a few days nearly every one of the 26,000 soldiers was prostrated. However, they were not seriously ill. There were only 2,000 of the 26,000 who were sent to the hospital or kept in barracks. That Division remained there until the influenza of the fall struck it. Twenty thousand more troops had come in, so there were about 46,000 men, and when the influenza epidemic occurred in the fall the medical officers testified that there was scarcely a man among the 26,000 who were there in the spring who had the influenza. It is known that the death rate at Camp Shelby from influenza in the fall of 1918 was the lowest death rate of any camp in the United States. Of the men at Camp Shelby, 0.29 per cent. died; at Camp Sherman, 3.2 per cent.; at Camp Cody it was nearly as high, and at various other camps, up to 2.5 and 3 per cent. of the men died.

There are two of three points very striking about the influenza epidemic. First, the influenza bacillus was with us in the spring of 1918. I am of the opinion that influenza was scattered all over the world. What causes epidemics? We believe that the influenza bacillus was, in its virulent form at least, imported from Europe. This may have been true to some extent but we believe that we had the influenza bacillus with us since 1890, and statistics all prove it had been with us constantly. We have had exacerbations of it from time to time but not nearly so deadly as in 1918. When it did come in 1918 the raw soldier succumbed, the recent recruit succumbed, but the seasoned soldier survived. I speak in comparative terms, of course. At Camp Lee, in Virginia, 9.1 per cent. (I usually say 10 per cent.) of the men had been in camp less than one month. They furnished 30 per cent. of the deaths. Ten per cent. of the troops furnished 30 per cent. of the deaths. Forty-five per cent. of the troops had been in camp six months and they furnished about 45 per cent. of the deaths, in the same proportion as there were troops. The remaining 45 per cent. of the troops had been there for more than a year, and they furnished 15 per cent. of the deaths. Now, why does the seasoned soldier bear the respiratory diseases better than the raw soldier? That is a question that puzzles us. I have only one explanation to offer. It may be wrong. Remember that the seasoned soldier bears not only the diseases which have been prevalent in that locality and in that camp, but also a newly imported disease better than the raw soldier.

The explanation that I offer is that there is what may be called a nonspecific immunity. There is a certain amount of increased resistance which may be dignified by the name of immunity, which is conferred on people who are brought together in great numbers. A full discussion of this interesting problem would take more time than is at my disposal.

#### THE LACY-HEIST METHOD OF TESTING IMMUNITY BY MEANS OF WHOLE, COAGULABLE BLOOD IN VITRO

SUCCESSFUL IMMUNIZATION OF RABBITS AGAINST TYPES II AND III PNEUMOCOCCI BY THE HEIST PERITONEAL BACTERIN \*

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I am glad to be here, my friends, and shall show my appreciation of the honor that you have paid me by going at once to the subject and omitting compliments. You can take them without saying.

I am very glad to have the opportunity of telling you of some work done by one of my "boys," Dr. (formerly Lieutenant) George D. Heist of Philadelphia, and also of giving credit to my friend Benjamin F. Lacy, professor of physics at the Central High School of Philadelphia, for giving to Dr. Heist and me the one hint that we wanted, in order to be able to carry out our observations.

To describe, then, what I have had pleasure in naming *the Lacy-Heist method of testing immunity* by means of the whole, coagulable blood:

This line of work grew out of my interest in the pneumonia problem. For many years, since my medical infancy, indeed, I have been convinced that, while quinin is not, strictly speaking, a specific in acute lobar or other forms of pneumonia, it is nevertheless of very special usefulness in the treatment of this group of infections. The clinical evidence of that usefulness is overwhelming and time need not be taken now to review it. Experimental work was undertaken in part to find an explanation for the clinical results; in part to carry conviction to some of the doubters who will not believe clinical results until confirmed by laboratory findings. It ought to be the other way, if any. I am not a technical laboratory worker. I can devise experiments but to carry them out requires training and time that I lack; and all of my friends who are engaged in experimental work have enough problems of their own to excuse them from taking up mine. But four or five years ago I had the opportunity to put

\* Fifteen minute talk at the meeting of the St. Louis Medical Society, Dec. 16, 1919.

Dr. Heist at the work, and my friend, Mr. Samuel Fels of Philadelphia, advanced a sufficient sum of money to finance it. We also had the great good fortune to obtain the interested and active cooperation of my colleague in medicine, though not of the same college faculty, Prof. John A. Kolmer, of the University of Pennsylvania, with whose general work you are doubtless familiar. Our joint investigation was able to show much concerning the relationship of quinin and other cinchona derivatives to the pneumococcus, and this has been published. Briefly, this group of agents possesses high specific bacteriotropism for that micro-organism. In other words, the cinchonics are, for the pneumococcus, bactericidal beyond all other chemicals known. Moreover the hemolysis caused by Cole's pneumotoxin and by the pneumonic exudate poison which has been demonstrated by Kolmer, Weiss and myself, can be inhibited *in vitro* by certain quinin salts, especially the dihydrobromid, which is also the most actively germicidal of the compounds suitable for medicinal administration.

But we came to a point in our studies where it was desirable to determine, if possible, the effect of blood and of its various components on the pneumonia germ and the pneumonia poisons; and whether or not such effects, if any could be shown, were influenced by the administration of quinin. A number of experiments made with various fractions of the blood—the red corpuscles, the white corpuscles, the serum, the defibrinated blood, as well as with whole citrated blood—gave negative or inconsistent, or at best unsatisfactory results; so we cast about for a means by which to study whole, coagulable blood, as nearly like the circulating blood as possible. Talking the matter over with Professor Lacy, he suggested as a means of solving our problem that we make use of what physicists call surface tension. We wanted to get the blood with all its components in natural proportion, before it was changed by the air, before coagulation, and without the addition of any chemical. Lacy suggested that we use capillary pipets, draw in cultures of the various germs that we wanted to study, allow the cultures to remain a short time, and then remove the fluid by the superior capillary attraction of a bit of moistened gauze to which the tip of the pipet should be touched, thus leaving a film of the culture deposited on the inside of the tube. Now, applying this tube to the vein or capillary of the animal or man, the blood can be drawn into the tube, which is then sealed, incubated for twenty-four hours, the contents blown out and examined. This method proved highly satisfactory. It is the Lacy-Heist method. By marking the tube at a definite point, filling with culture to that point, then drawing the blood to the same point, thus replacing the fluid exactly, we can, by using a series of tubes and graded

cultures, have an approximately quantitative method of measuring the effect.

Pigeons and chickens are naturally immune to the pneumococcus. The rabbit and the mouse are very susceptible to the pneumococcus. We first experimented with pigeon's blood and chicken's blood, drawn into a series of pipettes on which we had deposited films from pneumococcus cultures of all types, but of various degrees of concentration. We cannot be sure that the same number of germs is always deposited on the wall of the tube out of a given culture, but we can be sure that there are more from a culture of 50,000,000 to the cubic centimeter than from a culture of 5,000,000. Chicken's blood is taken directly from the heart because it coagulates so rapidly. We found that the pneumococci, except in the very highest seedings, failed to grow in the chicken's blood and failed to grow in the pigeon's blood in any concentration that we used. Of course we had the necessary controls. I need not go into obvious details. The pneumococci, if freshly taken from a patient, grew luxuriantly in the rabbit's blood, and also in the blood of the mouse; but cultures of lowered virulence, from long cultivation on artificial media, failed to grow. We found that there were some men and women in whose blood the pneumococcus would not grow. In that of others it flourished. Some of those in whose blood it would not grow had recently recovered from pneumonia, but some of them had never, so far as they knew, had pneumonia. This indicates one of a great many problems that have been opened but have not yet been solved. I am speaking therefore only of the method of study, not drawing conclusions as to the mechanism of immunity. Kolmer and Matsunami tested our method with meningococci, and Myer Solis-Cohen and Heist with the globoid bodies associated with anterior poliomyelitis—and Heist has studied various other organisms, pathogenic and nonpathogenic. As a result we have arrived at certain general conclusions for which the detailed evidence has been published; namely, that when a culture will not grow promptly in the blood of a man or animal under the technic described, that man or animal is probably immune to that particular germ or strain; and conversely, that when a culture will grow, the man or animal is susceptible.

We then conceived that it might be tried out as a test for immunity in bacterination (vaccination) experiments; a test which will be conclusive without sacrificing the animal, or without collecting men in large numbers and exposing them to infection and then reasoning by statistics. In other words, that it is a test applicable to individuals. We find, briefly, that such is the case in many instances. How far its scope extends can be determined only by observation.

I may relate as a type of such observations, certain experiments with pneumococci and rab-



bits. Ordinarily it is hard to immunize rabbits against the pneumococcus, and especially Type III. We had a Type II strain obtained from the Rockefeller Institute. We tried the blood of a rabbit on this culture, found that it failed to grow in the rabbit's blood, and concluded that the culture was nonvirulent from long artificial cultivation in our laboratory. Testing it, it failed to kill the rabbit. We then passed that culture through various generations of mice and rabbits until we had stepped it up to a point at which it could grow in the blood in which it had first refused to grow. Then we concluded that we had a sufficiently virulent culture to experiment with. Testing it, it quickly produced the death of the rabbit. Heist then devised a method of getting a bacterial vaccine which is not generally known, and which may not be commercially applicable, but which is scientifically interesting. Inoculating this virulent culture into the peritoneum of a rabbit and chloroforming the animal just before death seemed about to occur, he opened the abdomen and washed out the bacteria from the peritoneal cavity with salt solution, obtaining about 60 c.c. of a suspension containing one billion bacteria to the cubic centimeter; and from this, by centrifugation and sterilization, he prepared his bacterin. With this preparation he was able to immunize rabbits so that the culture would not grow in their blood, and so that they survived inoculation with heavy doses of virulent culture. We tested it sufficiently to be sure that this was the fact. Now, the point is this, briefly. A potent bacterin (vaccine) can be prepared even against pneumococcus of Type III by this method; and immunity of the individual can be determined by the use of whole coagulable blood *in vitro*, without sacrificing the animal, or in the case of man, without exposure to infection. Finally, we proved that the test is even more sensitive than the agglutination test. In other words, we can demonstrate and prove immunity by the Lacy-Heist test with the whole coagulable blood, where the agglutination test fails. It may be that the coagulation which takes place in the capillary tube has something to do with the phenomenon described. We do not know. We do know that the property of killing bacteria *in vitro* belongs to the blood of immune individuals. It does not explain immunity; but it is an accompaniment and index thereof. As such it can be, and should be, largely utilized.

Whether all the germs are killed, or only a sufficient number to prevent growth in twenty-four hours; whether the phenomenon has something to do with coagulation, or is purely phagocytic, or depends on antibodies, opsonins, etc.—whether in natural and acquired immunity the mechanism is the same or different—all this, as discussed in our first published paper (1917) is still to be determined. At present we speak of its advantage as a test—and that only.

## THE TREATMENT OF A MILD CASE OF DIABETES MELLITUS\*

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I will talk fifteen minutes on the treatment of a mild case of diabetes mellitus. When the patient comes in it is a good plan to give him a talk somewhat as follows: "Your body is a gasoline motor. The gasoline is represented by the sugar. It contains power, and when burned gives energy. You have in your body a certain organ which plays the part of the spark plug, viz., the pancreas. It provides something which is necessary for the ignition of sugar. When sugar appears in the urine, it is like black smoke from the exhaust of an automobile. The motor is flooded. Good fuel is going to waste." Teach the patient in this manner so that he may understand the rationality of what you are trying to do for him, because he will have to carry it out for himself at home afterward. No matter how good the treatment is, unless followed up, it is a waste of time and money.

The first object of treatment is to put the pancreas at rest. When the body is flooded with sugar we may assume that the sugar constantly stimulates the pancreas until it is driven into a state of fatigue so that it does not "spark" as it should. A storage battery constantly called on runs down until it will no longer turn the motor, but if given a rest it tends to reaccumulate and after a rest it may again work sufficiently to run the machine home. Also, after a rest, the pancreas may show a marked degree of recovery. The tolerance improves. To put it at rest we must get the excess of sugar out of the blood. We know when the blood is not carrying more sugar than can be used because when this is the case we can no longer find an excess of sugar in the urine. If all sugar is used none leaves the body, and this is the best test. A refined urinary sugar test is better than a blood sugar test. So desugarize the patient. Tell him the reasons why you are trying to do this and exactly how you are going to do it. Provide him with a notebook and have him enter a note as to his condition—what you propose to do, your reasons, and in detail how you proceed. Also provide him with a simple food scale, whenever possible, and have him at once become familiar with quantities. Have him make entries in his note book every day and see that every day he enters all that he should know about that day's procedure. Not only that, but quiz him to see that he knows it and does not merely write it.

To an ordinary mild diabetic we commonly give a diet consisting of 400 gm. of vegetables

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containing not over 5 per cent. of carbohydrate; that is, lettuce, tomatoes, cucumbers, string beans, cauliflower, etc. Give him a list of these articles at this time and let him make up a menu that would do just as well as the one you order. In addition to the 400 gm. of greens, he may take of course, water, clear soups, tea or coffee, salt and pepper, as desired, since these things have no food value worth considering in this connection. A salad dressing composed of mineral oil, as described by Joslin, adds to the patient's comfort, and the bran-agar muffins introduced by Allen may also be used if desired.

On the first day of the diet let him keep warm and quiet, in order not to expend too much energy while he is not receiving any from his diet, and to give you time to observe safely how he reacts to the low diet. It contains only 12 gm. of carbohydrate and some 4 gm. of protein. He will stay on this diet until he becomes sugar-free (mild case), at which time he is through with it. How does he know when he is sugar-free? Teach him, unless there is some psychologic reason for doing otherwise, how to make a sugar test. Provide him with Benedict's solution or Haines' solution, so that at another time he may repeat the operation of desugarizing all by himself. When he is sugar-free, keep him on this diet at least one day to make sure. Then start him on the second objective. Let the pancreas rest for at least ten days. Keep him sugar-free without taking any chances of a possible recurrence of glycosuria. During that time, however, since there has been protein starvation, give the preference to additions of protein. If he desugarized promptly in twenty-four to forty-eight hours, then on the next day but one give him three eggs, containing 18 gm. of protein and 18 gm. of fat, merely to provide him a little energy and to lessen protein waste. As to how far to proceed with additions of protein in order ultimately to bring him to the lowest safe level, authorities will differ. A practical rule is to build up the protein until there is 1 gm. of protein for every kilogram of body weight, with only so much fat as can not be separated conveniently from the eggs and meat given. On three eggs he is receiving only 18 gm. If on the next day he is still sugar-free, go on cautiously with the additions of protein. An early addition to the menu is usually something to complement the greens and liquids. A recipe which we use frequently is a bran-egg-soybean muffin, which is very palatable and which we reckon at 4 gm. protein and 2 gm. fat per muffin. This is similar to muffins used in many of the metabolism clinics in this country. If all is well after the three eggs, add in three of these muffins. On the following day add 10 or 15 gm. of butter, because this will make his diet more agreeable besides adding more calories and as we are speaking of a mild case we need not fear the fat. An addition of 100 gm. of 10 per cent.

vegetables before giving the butter has the advantage that it keeps down the ratio of carbohydrate to fat. Do not rush the matter and especially until a week or ten days have gone by. If at the end of a week, in a mild case of diabetes weighing 60 kg., we have succeeded in introducing 18 gm. of starch and in adding 60 gm. of protein and 40 gm. of fat, we are in a position to begin building up calories, which is the third objective. We have the minimum safe allowance of protein, now we must add the calories. One must now use judgment as to whether to go up in fat, to add more protein, or to add more carbohydrate. Frequently at this stage of the operation we prefer to put in first more carbohydrate, then more protein, then more fat.\* But we endeavor always not to let the fat represent more than two and a half times the weight of the carbohydrate in the diet. In this way, working up gradually, watch for a return of sugar. Try to give the patient a total caloric allowance which will be on a basis commensurate with the individual's physical activity. For instance, if a man is in ordinary sedentary clerical work, we would not try particularly to go above 25 calories for each kilogram of weight, nor to exceed 1,600 or 2,000 calories for one weighing 60 kg. If more active, try to push up the diet further, to 30 or even 40 calories per kilogram, as conditions require and the case permits. Having him in a protein equilibrium, caloric equilibrium, and still consistently sugar-free, the fourth objective is to ascertain his tolerance, and for that purpose we usually rely on straight white bread, because its composition is fairly uniform. Of that we administer 25 gm. additional every day or every other day until we find an amount which is just sufficient to produce a recurrence of glycosuria. Having determined that, we again desugarize, making a total subtraction of the bread so as not to delay desugarization. The patient having kept his notes, his lists, etc., and knowing his objectives, how many calories he can tolerate and what percentage of carbohydrate, fat, and protein is best contained in his diet, we then instruct him systematically how to vary his diet at home and still maintain the same balance. For that purpose, the steady, every-day, kindergarten method of instruction carried out by the physician himself, or, if he has a great deal to do, by an assistant or experienced aids, is absolutely essential for a successful after-care of the case. I believe with the knowledge that is already prevalent concerning the dietetic hygienic management of diabetic cases, that if there is one phase of the problem which might be emphasized to the exclusion of others in the short time at our disposal tonight, it is the educational phase and the great difference in the results which are obtained with the ignorant, the illiterate, with dispensary patients, and with patients in wealthy families, if they are made



thoroughly to understand the nature of their disease, the objects of treatment, how to attain these objectives, and how to know when they have attained them. Patients do well and refrain from breaking their dietaries when they know what they are trying to accomplish and have been thoroughly taught how to carry out their own treatment in their own homes with the implements and materials and under the conditions that they find there.

#### A FEW OBSERVATIONS OF CERTAIN CONDITIONS IN EUROPE AFTER THE WAR\*

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After coming into the hall this evening and listening to Dr. Vaughan, Dr. Cohen and Dr. Woodyatt, I have changed my subject. I had intended to say a few words on the *cause of pain in gastric and duodenal ulcers*, but I now realize that there is such a surfeit of medical wisdom here tonight that an interlude may not be out of the way. Furthermore, I have been out of experimental work for two years, and today, on cross-examination in court, I have been turned inside out by some of the legal lights of your delightful city; so I do not know whether I have left in me any scientific or medical information worth your while. But, with your kind indulgence, I should like to relate two or three observations on conditions as I found them in certain parts of Europe, and present a few comments in their connection, not as a scientist but as a plain American citizen, apropos the great question of foreign policy now confronting our country.

After the armistice I, with hundreds of other army officers, was assigned to the American Relief Administration under Herbert Hoover. In that capacity I worked in Finland, in Russian Karelia, in the Baltic States (Esthonia, Latvia, and Lithuania), in western Russia, back of the Polish lines, in Poland, in Czechoslovakia, in Austria, and in Jugoslavia. I will not touch on conditions as I found them in Jugoslavia. Possibly my colleague and fellow officer, Dr. Gephart, will refer to those.

In this work I met all kinds and conditions of people, those in high stations and those in low stations, captains of industry, government officials, laboring men, the poor and the rich. While I had to do primarily with food import, food distribution, and rationing, and with the feeding of several millions of undernourished children, I necessarily gathered a great many facts and observations that have a broader applica-

tion. First, I will touch on the political conditions in those countries. I hope I am not a dogmatist. I believe I still retain the saving grace of scientific judgment, that is, the attitude of mind which takes all the facts into consideration. Finland, of course, was a part of Russia. I was in Finland early this spring, before the election of their first president, while the dictator Mannerheim, a Russian general, still was the regent of the country. The people had gone through a terribly bloody class war, the so-called "Red" revolution, virtually a war of the Finns against the Swedes, the latter having been the ruling, upper, and oppressing class for centuries. In general, the Swede in Finland occupied in the past the same position toward the Finn as the Baltic baron in the Baltic States occupies with reference to the poorer and less educated Slavic population. There was ample evidence that in the suppression of the "Red" revolution in Finland the "Whites" had gone the "Reds" several degrees better in brutality and extermination of life. In other words, the "Whites," as representing "law and order," had been worse than the "Reds." And as a result there is an intense feeling of class hatred in that country that will last for generations.

In the Baltic States I found this peculiar situation. The Esthonians, the Letts, and the Lithuanians have their own armies, and these, aided and abetted by France and England, are fighting against the Russian Bolsheviki. But in these three small countries, formerly a part of Russia, the Baltic baron party regards the Esthonians, the Letts, and the Lithuanians themselves as Bolsheviki! The Baltic baron is really a new species of *homo sapiens* to me. He is a pocket edition of the Russian Czar, the logical product of a super class created by wealth, education and political power as against the mass of the people. He believes that the ordinary Esthonian, Lett, and Lithuanian, that is, the common people, are really not of the same flesh and blood as he; that there is biologically a difference between them. He does not admit that they are capable of education, advancement and self-government. He has no conception of social justice and democracy. He cannot understand that we Americans really and seriously hold to these tenets of our Constitution and Declaration of Independence. He thinks it camouflage on our part. I have talked with these well educated and apparently intelligent men. They stand pat for the old "law and order," passed by and enforced for the benefit of their class. On these matters they are like the old Bourbons of France; they cannot learn the new principles of democracy and social justice and cannot forget their inherited and special privileges. They are going to be a serious impediment to the development of democracy in those countries because the baron party has the money, the land, and the education, and hence the barons can do

\* Fifteen minute talk at the meeting of the St. Louis Medical Society, Dec. 16, 1919.

almost what they desire. I am informed that in Esthonia 250 men own three-fourths of the land.

In Poland there is a great difference between the conditions in what was formerly Austrian and German Poland and what was formerly Russian Poland. Russian Poland is typically Russian and there is a difference in education, in industrial development, and in general intelligence between the Austrian and German Poles and the Russian Poles—a difference of a hundred years, I believe. My sympathies have been with the Poles and for a united Poland, but I am sorry to say that I received a very discouraging impression from most of the officials in the present Polish government. Generally speaking, the present Polish government represents the aristocracy, the land owners and barons; and these Polish barons in Poland, in Lithuania, or in the Ukraine, cannot be distinguished from the Baltic barons in the Baltic States. In fact, they cannot be distinguished from the Prussian Junkers of Germany. They have no faith or confidence in the "rank and file" of the people. More than one of these officials have said of their own people, "They cannot be trusted"; "They are all thieves." On the other hand, what do the people think of these lords and rulers? The people say: "They are all grafters." What stability and progress in government can you expect under such conditions?

Of the governments of all the newly established countries, the Czechoslovaks or Bohemians made the most favorable impression on me, not only as regards their internal democracy but also as regards *their peaceful intentions towards their neighbors*.

There is another very serious condition in connection with the future peace of Europe and of the world which is very apparent in these countries. The ruling junkers in Finland, Esthonia, Latvia, Lithuania, Jugoslavia, and especially Poland, are starting out on a grand military career. Even little Finland, up near the North Pole, has been smitten, and the Finn junker wants the greater part of Russian Karelia, including Petrograd. Prussian militarism survived Nov. 11, 1918, and has infected the entente world. Or shall we call it the New French Militarism?

I was asked by an official in Finland: "Why do not the Allies give us Karelia?" I was not in Finland on any "diplomatic" mission, and especially not promoting any land grabbing game, and I suggested, informally, that possibly Karelia was not for the Allies to give away; that I was under the impression that Karelia was a part of Russia. "Well," he said, "if the Allies will not give us Karelia, we will go and take it." That represented the spirit of the Mannerheim party then in power; and nothing pleased me so much as to learn that the common sense, sober majority in the Finland Diet turned Mannerheim down and elected a more modern

man, a real liberal, as first president of the Finnish Republic.

In Poland the junker idea, encouraged by France, is to extend the boundaries so as to include the largest extent of territory the Kingdom of Poland ever held at the point of the sword. When I was there in July and August, the Polish army had advanced into Russia to the extent of including at least 20,000,000 Russians within the boundaries of Poland. Their criterion as to whether a territory is Polish or not is—if there is a Polish land baron in one Russian county that makes it Polish. At that time the Polish army numbered over 500,000 men, and they were still going strong in recruiting.

I feel that the Allies and America made one very serious mistake. One of Wilson's fourteen points was a principle of disarmament, an all-round disarmament. There is nothing said of this in the treaties of Versailles, except disarmament of the enemy. But what is the difference between militarism in one country, and militarism in another country? The Allies, and we with them, are making possible and encouraging army mobilization and war in these newly established countries. We are selling them our war junk, and are saddling on them huge national debts for war purposes, at the very beginning of their national existence. In my judgment, that is a very tragic mistake if we are serious, and I take it we are, in the ideals for which we entered and fought the war. Have the American people so completely forgotten the teachings of Washington and the democracy of Lincoln to sanction such a policy? If the American people knew the facts would they approve this policy? I do not believe it!

I shall end by expressing this wish, that we, as a nation, might have "all the cards on the table," now that we must make a decision, the most momentous for our country since the Declaration of Independence.

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#### TYPHOID FEVER IN THE AMERICAN EXPEDITIONARY FORCES\*

HAVEN EMERSON, M.D.  
NEW YORK

I am doubly grateful for the privilege of being here and for having a chance for a moment to bask in the illumination of the previous speakers. I have no original contribution to make, but I should like to report the conclusions at which I arrived after studying the reports for which I was officially responsible in the A. E. F., with regard to the incidence of typhoid fever.

At the office of the chief surgeon there were reported approximately 1,400 cases of typhoid fever. The deaths amounted to 11 per cent. There was one group of 100 cases in which

\* Fifteen minute talk at the meeting of the St. Louis Medical Society, Dec. 16, 1919.



the death rate was as high as 13 per cent.; but, in the main, the death rate was what it has been in typhoid fever for generations. It is obvious, and was proved by record beyond any reasonable doubt, that these cases of typhoid fever were in vaccinated, and thoroughly vaccinated, men. It was not lack of the usual degree of protection from vaccination, but exposure, frequently repeated and in massive doses, to fresh typhoid infection which caused the overwhelming of the artificial immunity of these men. There was no particular difference between the clinical course of typhoid in these vaccinated men and the clinical course of typhoid as we have been accustomed to seeing it in this country. There are no records from the A. E. F. showing that there was any less protection from the lipovaccine than from the saline suspension vaccine. There is, however, experimental evidence to show that artificial immunity from one dose of lipovaccine is less prompt in development and of a lower degree than that from the three doses of saline vaccine. Furthermore, it was shown from the experience and studies of the central laboratory in France that the lipovaccine is not so readily prepared free from accidental infection from other organisms, such as the streptococcus, as is the case with the saline vaccine. There is evidence that the infection of the 1,400 men in France with the typhoid bacillus and with the paratyphoid A and B, was with organisms which are similar in all respects to the organisms against which the vaccine protected our men in this country. The strains of the cases and the groups of cases were studied, the agglutinin reactions were studied, and although slight variations in some of the strains were observed, there was no fundamental difference in the kind of infection from which they were suffering, from those with which we are familiar here, or from the strains which were taken to France by the central laboratory to test against foreign strains.

It may be said that neglect of sanitary control of water supplies is a menace and may cause serious epidemics, even among vaccinated men. Neglect of control of food handlers as to clinical or carrier typhoid state, may cause serious epidemics in vaccinated men. The two types of typhoid epidemic, speaking of them as small groups, in the Expeditionary Forces, were those that occurred from known, obvious, well established water supply infections, and those which resulted from exposure to typhoid carriers working in kitchens and mess houses. Unfamiliarity with the disease and the conviction that typhoid would not occur in our forces, were chiefly responsible for the failure of medical officers to recognize even typical clinical cases of typhoid, with enlarged spleen, abundant rose rash, and the usual picture of the disease. This went so far that in the Marseilles epidemic forty-three or forty-five cases were reported originally as suspicious typhoid but at the hos-

pital the medical officer, who had been steeped in influenza experience, was, as you might say, hypnotized by his clinical experience, and insisted on reporting all of these cases as intestinal influenza. Furthermore, the pathologists were so convinced of the accuracy of their superior officer that the necropsies, although showing enlarged Peyer's patches, and in some instances, ulcerations of the gut, reported cases in protocol as intestinal influenza. It was not until the pathologists at the central laboratory, two men of wide experience, reviewed those necropsies that it was shown how many cases of undetected typhoid had gone through that hospital passing for intestinal forms of influenza. Certain other groups of cases were discovered by the study of necropsies. This occurred in the first sharp outbreak that we had in France—among the Camp Cody replacement draft of June—in which a death among thirty-one sick men who had been taken off the transport at Liverpool was found at necropsy to have been due to typhoid, and another death at Cherbourg two days later, followed by necropsy, was also shown to have been from typhoid fever.

The story of this Camp Cody group may be interesting. Two hundred and fifty men, without a commissioned officer, left Camp Cody with one man who, for two or three days before leaving Camp Cody, had been feeling sick. He would not, short of for the loss of a leg, have reported sick to the medical officers of the camp. He was bound for overseas, and was going to get there. During the six days on the troop train, in the trip from Camp Cody to Camp Merritt, several others were taken mildly sick in the same way. Eight or ten were in the same condition of mild sickness, not sufficient to cause them to report to the medical officers before they embarked. At the time of reaching Liverpool thirty-one men had a mild form of fever with indisposition, but still there was no report to the medical officers by the enlisted men, who had not been so far supervised by a commissioned officer. On their way from Camp Cody to Camp Merritt during six days there had been a common water barrel attached to the kitchen car with a common drinking cup attached to the barrel. There was a latrine can in another car, and there were no permanent or adequate washing facilities between the latrine can and the water barrel, resulting in what one might call a continuous "hand to mouth" opportunity for the typhoid. There was obviously an opportunity for massive and frequent infection of the men by the first, second, and third cases, which ultimately were found to have definite typhoid fever. But in most of the first forty cases the disease had run a two to three weeks' course before it came under clinical observation. There were eight perforations in that group. The death rate was 13 per cent. Not a single case developed among any organi-

zations with which the Camp Cody group had come in contact. We feel that there was fair evidence in this fact that the Camp Cody men had been subjected to a degree of dosage with fresh, virulent typhoid infection which others had not met, and that probably those who had traveled with them had had no degree of contact comparable to the amount of infection which had succeeded in overwhelming the vaccine immunization of this particular group. It so happened that the medical officer who had been responsible for the vaccination of the men at Camp Cody was in France and could verify the statements of the men as to the completeness, adequacy, and date of vaccination. A test of the constant high agglutinin power of the blood of men who had not acquired typhoid in that group, showed confirmatory, although not scientifically perfect, evidence that the records were correct. There is every evidence to believe that the men had all been vaccinated.

Another extremely interesting and important group of typhoid infections occurred at the medical department concentration center at Joinville, where thirty or forty field, mobile, and camp hospital organizations were waiting for embarkation; and in that assembly of what might be called the "cream" of the medical profession there was such neglect of the elementary precautions with regard to the drinking of known, obviously polluted water, that twenty of those organizations had to be held for various periods of time to eradicate the typhoid before they could be allowed to embark for home. It was evidently in the consciousness of the enlisted personnel of the medical department and of the nurses and medical officers that if there was anything they did not need to bother about it was the water supply; that they were immune and did not need to fear typhoid fever; and when they had their own opportunity to be careful or neglectful they were neglectful. At that time there were 100 or more cases almost exclusively among members of the medical department.

Clinical cases frequently occurred without discovery of the organism, and that led to an important modification in the general orders concerning the reporting of typhoid. It was formerly required that nobody should report typhoid unless the organism was found. This was a procedure which led us into a great deal of difficulty because many doubtful, undetermined, unverified cases were held under observation, without notifying the central office or the central laboratory, so that the epidemics could not be properly checked at their inception. It was necessary to change the order and require all suspicious and all clinical cases to be reported, as well as cases in which the proof of the disease had been obtained from laboratory examination of the blood, stool, or urine. It was ordered that the disease in its suspected

form and in its mild clinical forms must be reported as typhoid, even in the absence of bacteriological proof. It was not uncommon in cases where the early stages of the disease had been mild that they had passed the time when the organism appeared in the blood before the examination of the blood was made.

I may say that the largest group of cases that occurred in the A. E. F. was among troops which had been rather thoroughly infected with dysentery at the time of the Chateau-Thierry offensive. At that time our troops overran ground recently occupied by German troops heavily infected with dysentery, as was obvious from the condition of the fluid feces on the ground surface of all the places they had occupied. There were blood and mucus in the fecal deposits of the Germans who had retreated. Our men went over that region under conditions which made it impossible to follow any sanitary precautions; and in the headquarters of the Division Surgeon, on a little shack just outside Chateau-Thierry, a sanitary inspector had tacked a board shingle bearing a sketch of a cat, with the simple statement, "Do as a cat does—cover it up." That was the nearest they could come to elementary sanitary precautions, and our men were heavily infected with dysentery. Colonel Zinsser and Colonel Swift at that time estimated 150,000 cases of dysentery. Among these troops there were cases of typhoid and paratyphoid. Later there was a higher proportion of carriers found among these troops than among other organizations. After the armistice, the troops and the medical officers were demoralized. There was neglect of many of the usual precautions and, until the troops left the Gondrecourt and Commercy area, there were new cases of typhoid reported every week. That region is heavily polluted because of the endemic prevalence of typhoid among the French residents since 1914.

The A. E. F. was not free from typhoid because the relative immunity of vaccinated men can apparently always be overcome when there is frequent or constant exposure to massive doses of virulent organisms.

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#### BOTULISM \*

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I regret to say that I have not at any time been a citizen of St. Louis; but if the errand on which I am now here progresses with no greater acceleration than within the last ten days, I may ultimately remain long enough to have the privilege of acquiring citizenship. Also,

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\* Fifteen minute talk at the meeting of the St. Louis Medical Society, Dec. 16, 1919.



I do not wish to address the society under false pretenses. I understand we are all supposed to talk about our own researches. The duties of my position are such that I can hold only supervisory relations to most of the research carried on by the bureau of chemistry. I am unable with my own hands to carry on research. So I must talk about the research of some of the men associated with me. The particular subject which I am going to present to you concerns the work of three men and one woman. They are Dr. C. Thom, Dr. Shippen, Miss Edmonson and Mr. DeBord.

A part of the work they have been engaged on for the last four or five years is a study of botulism. It may perhaps prove of interest to you in view of the occurrence of botulism during the last few years in this country. Being in the Department of Agriculture, we start experiments usually from the standpoint of animals. So our work on botulism started with forage poisoning. It may seem a long cry from forage and silage to canned goods, but that is the road along which we traveled. It may not be widely known perhaps, but every once in a while horses die from the feeding of silage and nobody seems to know particularly why, when, or how silage may prove dangerous to stock. The symptoms of some of these types of poisoning remind one of the symptoms described in literature as characteristic of botulism in man, a central paralysis which progresses downward, death resulting, as a rule, from paralysis of the respiratory centers. It has been a long time since I have had directly to do with things clinical so I hope you will forgive the sketchiness of my description of the symptomatology of botulism. We had no particular basis from which to start investigation of this type of poisoning and so we grasped at straws. We started with the hypothesis that there was a basis for this resemblance.

At first Dr. Shippen carried on investigations to determine whether it is possible for the organism that produces the poison—the so-called *Bacillus botulinus* isolated, I believe, originally from sausages causing the disease originally known as sausage poisoning—to grow under conditions which prevail in the silo. It did not seem likely that such could be the case as this organism is described as obligatory anaerobic, and a silo is not particularly air tight; as a matter of fact, there is so much carbonic acid formed in the fermentation that goes on in the silo that the atmosphere above the silage in the silo has been known to asphyxiate men working there. It was found that the organism when grown in symbiosis with yeast is capable of growing under ordinary conditions and without taking any very special precautions to produce anaerobic conditions. Apparently the conditions in a yeast culture medium, or one in which fermentation is rapid, are such that there is sufficient carbonic acid formed to dis-

place the oxygen dissolved in the culture medium, and make it possible for as strict an anaerobe as *B. botulinus* to grow in the under layers of the culture medium under conditions in which one would originally not suppose the organism would grow. In this situation it did produce a toxin capable of killing horses. This does not prove by any means that forage and silage poisoning, so-called, are due to this organism. It simply made it a probability which was followed up by Dr. Graham, now of the University of Illinois, with fairly complete demonstration. These studies gave us our starting point for the investigations of the conditions of growth of this organism in all sorts of foods; and while we were studying this organism we ran into several cases of food poisoning in which we have been able to prove definitely that the cause was the development of this organism in the food.

We had one case in New Jersey, which may be outlined as follows: A family consisted of father, mother, two daughters of high school age, and a younger son. The mother had for a cold supper some bean salad, made from beans which she had canned herself. The daughters wanted to go to a dance and were in a hurry, so they hastily ate some of the bean salad—not much else—and ran off; and they both died. The boy started to eat the salad, and said it was not fit to eat. The mother censured him for having bad manners at the table. The father smelt of the salad and said it was true—that it was not fit to eat; and neither father nor son ate any of it. The mother, to show she was right, ate a little of it. The mother was sick for a long time—several weeks. The father and son were not affected. Examination of the beans showed that they were really very foul smelling and cultures from them killed experimental animals. We never have finished this piece of work, never have reported, and probably never shall, because, in the midst of it, Mr. DeBord was taken into the Army Sanitary Corps and the cultures and materials were lost.

More recently there was a case in Boise, Idaho. This was due to asparagus, home canned. I have forgotten now the exact conditions there, but several deaths occurred in one family. The asparagus was eaten cold, in the form of salad. From this asparagus we isolated an organism which corresponds with the description of the *B. botulinus*, but which is of a rather different type from those which we have gotten from other workers in the East who have studied cases. We are inclined to believe that there are a number of strains, or perhaps that what has been regarded as a single species represents a group of organisms which belong to at least two types. They resemble each other very much, except that one lot has spores which are killed at relatively low temperatures and the other has spores which are

killed only at relatively high temperatures. Where we have found the organism which is more resistant it has come from the western part of the country. Where we have found the organism that is less resistant it has come from the eastern part of the country. There are other differences which it is not necessary to go into here.

More recently, as you know from the press, there have been further occurrences of this trouble. Up to that time all cases with which we were familiar occurred in home canned material and all the material, as far as obtainable by us, was obviously spoiled; in fact, one can describe it by using the forceful but inelegant expression, that it stunk. It did not seem that anybody would be willing to serve it. But apparently you are willing to take a chance with what you put up yourself that you would not take with what you had bought. This consideration seems to be a factor in the situation. A recent occurrence, the first of which I am aware in which a commercially packed article caused trouble, was the now well known poisoning by ripe olives which first appeared in Canton, Ohio, then in Detroit. Dr. Victor C. Vaughan's son, I believe, studied one of those outbreaks, isolating the organism and was good enough to send us a subculture, which was very similar to the culture that we had previously gotten from the asparagus in Idaho. An organism has also been isolated from the Canton, Ohio, case. We have also obtained a subculture of this from Dr. Freeman of the State Board of Health in Ohio. It is the type of organism with resistant spores.

If you will look through all these occurrences you will see that there is one common factor in every case—the food was consumed on the table uncooked, that is, direct from the can. Intoxication with the organism is not, as a rule at least, an infection. It is a true intoxication. The organism produces a toxin, which is absorbed and produces its effect. Very minute doses may be fatal. We have had cultures of which a fraction of a cubic centimeter given to a burro (we wanted a larger animal which was not too expensive) by mouth, has proved fatal. This toxin is destroyed at the temperature of 80 C., hence food freshly cooked appears free from danger even though the organism and toxin were present before cooking. It rather toxin were present before cooking. Cultures washed fourteen times in the centrifuge have been fed in large quantities without producing the slightest effect. Washing three to seven times, which will usually free organisms from toxic by-products, was not sufficient to remove the traces of this toxin which are capable of killing guinea-pigs. It is thus quite clear that it is the toxin which is dangerous.

The occurrence of intoxication from the

olives is probably to be explained in this way. It is not characteristic of olives. Olives are not more dangerous than other articles of food. In these particular occurrences the organisms which were isolated from the canned olives were all isolated from the same factory. Probably just this one batch in the factory produced the trouble. We had our inspectors working for a whole month. Most of them did little else but travel about the country trying to locate these cans of olives out of the many cans of olives put out by this concern. We have not been able to locate the organism, except in one particular batch.<sup>1</sup> The olives were shipped in tank cars long distances in California in brine that was very weak, not strong enough to stop the growth of the organism. Through a mishap, this tank was probably infected with the organism, was not handled quickly, and developed a very large quantity of spores and organisms in the olives, so numerous that subsequent manipulations did not destroy all the organisms, particularly as the temperature of the processes in preparing these olives is not very high. And, as this was the western strain, the spores were moderately resistant, unlike the eastern strain.

The remedy is, not to consume a single can of canned goods that shows the slightest evidence of spoilage. It is easily conceivable that, in the tremendous mass of canned goods which is put up commercially, once in a great while a can or occasional batch may be affected. This is always likely to happen. It will apply to home goods as well as to commercial goods. We must not eat anything that shows the slightest sign of spoilage or fermentation, or has the slightest abnormal odor; and it is wiser to heat foods—to the temperature of boiling water in the case of preserved foods—to make them reasonably safe.

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#### DIFFERENCES BETWEEN DIAGNOSES OF CHLORAL AND MORPHIN POISONING\*

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I think, after all the stimulation we have had, that it is time to administer a little hypnotic, so I am not going to speak fifteen minutes (at least I do not intend to).

I want to tell something about the differences between our diagnoses of chloral and morphin poisoning. My attention was called to this be-

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1. Between the time this address was made and its publication another poisoning case has implicated a related batch put up by this company at the same time. Also two other groups of deaths have involved olives put up by other companies.

\*Fifteen minute talk at the meeting of the St. Louis Medical Society, Dec. 16, 1919.



cause I noticed that many of the students who were taking the national board examinations practically failed on this question, although all, or many, could tell the differences theoretically. The mistake has also been made in diagnosis by many practitioners.

It does not seem to be common knowledge that large doses of chloral will produce a pin point pupil, and diagnoses of morphin poisoning have been made because of this. Some of the differences, however, are very apparent; in fact, there is no similarity except in this pin point pupil. In morphin poisoning the reflexes are always exaggerated, especially so if the poisoning has lasted any length of time. The action of morphin is very manifest in stimulating the reflexes if it be injected into the lumbar region of the cord. If this is done a strychnin-like tetanus may be obtained. Such cases have even been reported in human beings. One of the other causes for the increase in reflexes is the depression of the brain. The inhibition is lessened therefore the reflexes are increased. This does not occur, however, in chloral poisoning, because chloral depresses the cord as well as the brain.

In making a study of this, trying to find the explanation a little more in detail, we have isolated the eyes of frogs and we find that there is some constriction when the eyes are placed in chloral solution, although not nearly so marked as that which occurs when the eye is in the body. The question is, how does the constriction occur? If you will remember, all that is said in textbooks on pharmacology about the pin point pupil in morphin is, that it is due to a deep central action that is not understood. How could a deep reflex or deep site of action influence the pupil? Manifestly, only by eliminating the inhibitory effect along the third nerve through the ciliary ganglion. It is quite possible that this occurs. In fact, it is highly probable that it occurs. It could not be done through the sympathetics unless it stimulates the sympathetics. Chloral could influence in the same way, but the sympathetics are depressed. Depression of the sympathetics causes constriction by permitting unopposed action of the circular muscle. A central depression might, by the elimination of the central action through the ciliary action, allow constriction or abnormal activity of the third nerve to develop to such a degree that that would constrict the pupil itself. That being the case we would suppose that the ciliary ganglion around that region would be the last to be influenced. This point we have not yet investigated nor have we gone into what would be most interesting to you, the best treatment for chloral poisoning. We are more interested concerning the mechanism of the action of both chloral and morphin, disregarding the treatment until we find exactly what to treat.

# AMERICAN RELIEF ADMINISTRATION EUROPEAN CHILDREN'S FUND\*

FRANK C. GEPHART

American Relief Administration European Children's Fund  
NEW YORK

The best does not always come last. It is a very great pleasure and a very great honor to be privileged to appear before such a distinguished audience and upon a program made up of such distinguished professional men. I, myself, am not a medical man. I have been associated with the clan, however, for twelve or thirteen years and during that time I have picked up quite a few points that have some bearing at least on medicine, but more especially points in the science of nutrition. I was in the army and, like a large number of other men, had a number of experiences with which I will not trouble you because I am sure you are tired of hearing of such experiences.

One of the most pleasant experiences I had was with the American Relief Administration. As Dr. Carlson has indicated to you, I was sent down into so-called Jugoslavia, or the state of S. H. S., as it is called, along with Professor Carlson, as a special investigator for Mr. Hoover of food conditions in that country. The reports which we made in Jugoslavia were used as a basis of the shipping programs of this administration. I shall not go into detail about conditions which we found there, but they can be pictured in this way. The Kingdom of Serbia, which is now a part of Jugoslavia, was completely overrun by the enemy, an enemy which extracted from the country every ounce of available food they could find. Every Austrian, Magyar, or German soldier who was in Serbia or Roumania, was required by regulations to send home to his parents or family, through military channels, a food packet weighing 10 kilograms. Every week he sent home a packet of this sort. Military authorities of course collected and stole all of the available food supplies. The live stock was all driven out of the country, except what few herds could be driven up into the mountains and hidden by the people. In spite of this fact, when the retreat of the German and Austrian armies started in Serbia, the Serbian farmer was able to ration the Allied army which forced the retreat. When Colonel Carlson and I went into Serbia two months afterward, we found that the Serbian farmer had been able to save, in addition to this food which he had sold to the Allied army, enough food to provide himself and his family, and to plant the whole country in 90 per cent. of its normal acreage in wheat. This had been made possible by concealment. The Serbian people have lived for centuries by these methods.

\* Fifteen minute talk at the meeting of the St. Louis Medical Society, Dec. 16, 1919.

They have been engaged in two occupations—fighting and farming. That is all they have had time to think of. They have been surrounded by enemies for centuries.

What we found was a picture of demoralized transportation, demoralized communications, exaggerated by what you might expect as a result of racial, religious, and political discriminations and jealousies. For example, one race in the northern part of the country might have a slight surplus, as was found in the northern provinces of Bosnia and Hercegovina. Their brothers, fifty miles south, of a different race, were living off the barks from trees, wild grasses, pears, etc. The people in the north would not part with the surplus of food because they were of a different race. We went into the country, made our observations, and sent in our reports. We supplied the people of Bosnia and Hercegovina with approximately 10,000 pounds of flour a month, giving them per capita about 12 or 15 kilos where they had previously subsisted on about 3 kilos. After we had restored the general population to at least a partial status of nutrition, we then turned our energies to a special form of relief among the children.

There was no milk in the country. There was no sugar in the country. A great many of the women were so emaciated that it was impossible for them to nurse their children. We organized throughout the country this special form of relief and provided these children, and are providing them today, with rations that furnish about 500 calories and cost only about 5 cents, made up largely of milk, sugar, and other foods that children need.

This is just a very small fraction of the general program of Mr. Hoover. As it stands now, the American Relief Administration, or better, the American Relief Administration European Children's Fund, a charitable organization continuing the work of the American Relief Administration of wartime activity, is providing 3,000,000 children in Europe with this supplementary meal. It is a great gratification to me to know that a work of this sort can be carried out on this scale and with this degree of accuracy. We have all been jeered, more or less, in the press. We have been termed food cranks. We have never really had the opportunity to show what could be done by the application of the laws of science and nutrition on a large scale. Mr. Hoover was a man of such vision and good common sense that he called into consultation with him men who did understand this science, and it this way he was able to place the work in operation all over devastated Europe in a scientific way. I shall not go into more detail concerning conditions in Yugoslavia as it is the general picture that Colonel Carlson has painted of other European countries. But the people there need the kind of help we are giving them. They need our support. The American people

are very popular in Yugoslavia because of this work and the stand which President Wilson has taken in connection with the newly formed states. It remains for us, as I see it, to live up to the promises which we have made to these people. If we do not, we cannot hope at all to preserve their confidence in the future or to prevent warfare that may possibly break out.

## WANDERING SPLEEN \*

### REPORT OF A CASE \*

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ST. LOUIS

The occurrence of wandering spleen seems to be of sufficient rarity to merit more than passing attention. Such spleens are usually diseased and enlarged and may be found far distant from the usual location of the organ. In every obscure tumor of the peritoneal cavity the possibility of a wandering spleen should be considered. True wandering spleens, which stretch the ligaments and elongate the blood vessels, are to be differentiated from enlarged spleens, which extend beyond the normal limits by overgrowth. The true wandering spleen sooner or later has a pedicle and usually may be moved freely in the peritoneal cavity unless adhesions bind it in its new location.

With the exception of displaced spleens occurring where the ligaments are congenitally elongated, disease and hyperplasia of the splenic tissue usually precede the displacement. The weight of such a spleen seems to be the chief factor in stretching the ligaments and causing the malposition. While trauma is assigned as an etiologic factor by some writers, it is difficult to understand a sudden stretching of the blood vessels and ligaments, since the peritoneum is not an elastic membrane and usually tears before it will stretch to any great extent. In the so-called traumatic wandering spleens it is reasonable to believe that the ligaments were congenitally elongated before the trauma. The condition may be a part of a general enteropitosis, especially accompanying prolapse of the left kidney. Women, especially multipara, are most often affected. Osler<sup>1</sup> reports several wandering spleens occurring in the same family as an evidence of a congenital etiology.

Most writers state that the recognition of a misplaced spleen is easy, due to the splenic notch. However, the notch frequently is obliterated by overgrowth or by adhesions of bowel and omentum, as mentioned in a case by Gemmel.<sup>2</sup> Gemmel also reports a case of movable spleen, in which rotation of the spleen had placed the

\* Read before the St. Louis Medical Society, March 30, 1920.

1. Osler: Practice of Medicine.

2. Gemmel: J. Obst. & Gynec. Brit. Emp., 14:17, 1903.



notch behind so that it could not be palpated. Both of his cases were considered to be ovarian tumors. The case which I shall present showed no evidence of a notch. The positive diagnosis frequently is lacking until the abdomen is opened. The employment of pneumoperitoneum should materially aid in the differential diagnosis of these conditions.

Wandering spleens are found usually in the left iliac region, but they may be found in the pelvis, right iliac region, or in inguinal, umbilical, or diaphragmatic hernias. They may be in any part of the peritoneal cavity. Frequently they are located to the abnormal location by adhesions.

The symptoms produced by a wandering spleen are due to traction on the stomach and other viscera, to the pressure of the tumor, to adhesions, or to twisting of the pedicle. Traction causes gastro-intestinal disturbances, dragging pain and uneasy sensations in the back and side, which Warren<sup>3</sup> claims may simulate pleurisy. The pressure of the tumor or adhesions may cause pain or intestinal symptoms or ileus. Twisting of the pedicle gives symptoms similar to those resulting from the twisted pedicle of an ovarian tumor. Neurasthenia may be a prominent symptom.

Mrs. W., aged 45, was referred to me on Jan. 18, 1919. She had been suffering for one and one-half years with repeated hemorrhages from the uterus which had left her in a deplorable condition. She had been told that she was suffering from an inoperable cancer of the uterus. The patient was very pale and emaciated. She was too weak to get out of bed. The hemoglobin was 45 per cent. and the blood pressure was 105 and 50. There was a distinct history one and one-half years previously of labor-like pains and colic, with a sensation of something being expelled from the uterus. The hemorrhages began at this time. On account of this history and the length of time the symptoms had persisted, a so-called "birth of a fibroid" was strongly suspected.

On examination a tumor about the size of a small lemon was found protruding from the cervix. The tumor was firm, not friable or ulcerated. It was attached by a pedicle to the anterior wall of the uterus at the level of the internal os. There was a mass to the right and above the uterus which was firm and smooth and extended as high as the umbilicus. The vagina was packed and a solution of glucose and sodium bicarbonate was given per rectum for two days. On Jan. 20, 1919, the pedicle of the fibroid was cut without anesthesia. No attempt was made at this time to deal with the intra-abdominal mass, which was considered to be a fibroid tumor. This operation stopped the bleeding and the patient improved rapidly and was allowed to go home on February 25 to recuperate.

The patient returned on Sept. 8, 1919, greatly improved. She had gained weight and strength. Her menstrual periods had been regular and not excessive. Examination at this time revealed that the cervix was normal and the fundus appeared to be about the size of an orange and was in the culdesac. A distinct mass was felt in the right iliac region extending to the level of the umbilicus. The uterus could be distinctly outlined apart from the mass, but there seemed to be a close connection between the two structures. The tumor was firm and smooth and without pal-

pable nodules. During the examination the tumor would jump suddenly to the left iliac region causing pain. The tumor was considered to be a pedunculated subserous fibroid of the uterus. The blood pressure was 104 systolic, 66 diastolic, white blood count 8,600, red cells, 5,000,000, hemoglobin 90 per cent.

On September 18, under local anesthesia, a suprapubic incision was made. The uterus was normal but retroverted. The adnexa were normal. The mass in the right iliac region was a misplaced spleen, 7 x 3 x 2.5 inches in diameter, with a projection about the size of an orange filling the culdesac. There was a fibrous adhesion of the spleen to the left ovarian region. A pedicle of about 1.5 inches in diameter with veins about three-eighths of an inch in diameter extended from the spleen diagonally across the abdominal cavity to the normal splenic region. The adhesion to the left ovarian area was severed between ligatures, the splenic pedicle was doubly ligated high up and the spleen was removed. The patient made an uneventful recovery. On Oct. 13, 1919, the blood examination was, leukocytes, 7,400; hemoglobin, 90 per cent.; red cells, 5,000,000. The differential count was polymorphonuclears, 63 per cent.; small lymphocytes, 20 per cent.; large lymphocytes, 11 per cent.; transitionals, 0.5 per cent.; eosinophiles, 0.5 per cent. Dr. R. L. Thompson gave the following pathologic report of the specimen: "Spleen is enlarged, weight, 400 gm.; measures 17 x 10 x 3 to 6 cm. in diameter. Surface is covered by a thickened opaque connective tissue capsule throughout greater extent, which is pitted in places. On section, organ shows marked increased consistency, Malpighian corpuscles not visible, trabeculae prominent. Microscopically the predominant picture is a diffuse fibrosis. Anatomic diagnosis: Chronic splenitis and perisplenitis."

This pathologic report with the negative blood examination and a distinct history of chills and fever every second day fifteen years previously, seem to justify a diagnosis of malarial spleen. Examination of the blood for the malarial parasite, however, was negative.

Evidently the spleen does not have an individual internal secretion or function necessary to the welfare of the patient, as splenectomy does not produce serious after-results. Pearce<sup>4</sup> reports that people with congenital absence of the spleen may live to old age without apparent symptoms. Other associated organs seem to take on the functions of the spleen after splenectomy. Pearce, Krumbhaar and Frazier<sup>4</sup> made a very extensive experimental study of the effects of splenectomy and report the following effects: 1. An anemia of varying degree. 2. Increased resistance of red cells to hemolytic agents. 3. Lessened tendency to jaundice by hemolytic agents. 4. Marrow of long bones changes from yellow to red marrow. 5. Marked leukocytosis, especially lymphocytes and eosinophils.

Hitzrot<sup>5</sup> mentions an increase in the output of iron in the feces. Eppinger<sup>6</sup> states that there is an increase in the total fat and cholesterol in the blood of splenectomized dogs.

The red cell count rarely goes below 3,000,000, the hemoglobin rarely below 55 per cent. There is a marked increase in the white cells around

4. Pearce, Krumbhaar and Frazier: *The Spleen and Anemia*, 1918.

5. Hitzrot: *Ann. Surg.*, 57: 540, 1913.

6. Eppinger: Quoted from Hitzrot.

3. Warren: *Ann. Surg.*, 33: 53, 1901.

20,000 to 40,000. DaCosta, Grawitz and Cabot<sup>7</sup> recognize a lymphocytosis and an eosinophilia. The leukocytosis generally reaches the maximum in two or three weeks and gradually returns to normal in about four months. The lymph glands may enlarge and pain may occur in the long bones indicating marrow activity. Weakness, loss of weight, thirst, polyuria, rapid pulse, enlarged thyroid, abdominal pains, and fever may occur. These changes occur in adults but not in children after splenectomy. Tizzoni<sup>8</sup> states that the compensatory organs act at once in children, but react slowly in adults.

Blumreich and Jacoby<sup>9</sup> find that there is no less resistance to infections or toxins after splenectomy. Czerny and Maydl<sup>10</sup> state that pigeons recover more slowly from hemorrhage after splenectomy.

All these changes are not noticed after the removal of a spleen which is diseased, which is usually the condition found in wandering spleens. Other associated organs, such as lymph glands and bone marrow, have already taken on the splenic functions. Apparently in the above reported case, the spleen was not functioning and the removal caused no apparent changes in the patient.

Since a wandering spleen usually is not functioning and generally causes discomfort, and because of the danger of adhesions, ileus, torsion of the pedicle, and splenic abscess or peritonitis, splenectomy is the best method of treatment. If the prolapse is not great and the spleen is not diseased, splenopexy may be performed. Lahey<sup>11</sup> reports a prolapsed spleen with acute torsion of the pedicle in which splenopexy cured the condition. However, where the pedicle is distinct and long, splenectomy is the easy and the method of choice.

Humboldt Building.

### VENEREAL DISEASE REPORTING IN MISSOURI

#### PRELIMINARY REPORT OF THE FIRST SIX MONTHS \*

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Section 6653 of the Revised Statutes of 1919 designated additional powers and duties to the state board of health among which are the responsibility of making and enforcing adequate procedures to prevent the spread of communi-

cable diseases within the state. Acting under this statute the board, on Oct. 8, 1919, issued rules and regulations which now have the force and effect of law. Section 1 reads in part as follows: "Any physician, or other person, who makes a diagnosis in, or treats a case of syphilis, gonorrhea, or chancroid, and every superintendent or manager of a hospital, dispensary, or charitable or penal institution, in which there is a case of venereal disease, shall report such case immediately, in writing, to the state board of health, the name and address, age, sex, color, and occupation of diseased person and the date of onset of the disease and the probable source of infection." This is the first attempt on the part of the state board of health to compile statistics which would show the prevalence of venereal disease. The statistics compiled by the Surgeon-General of the Army is the basis on which we estimate the number of cases in the state.

The percentage of venereal disease among the second million drafted men placed Missouri thirty-sixth in the list of states, with 6.1 per cent. of men infected for the entire state. The city of St. Louis showed an infected rate of 8.58 per cent. This shows that Missouri ranks with the states below the Mason and Dixon line. Later figures from the Surgeon-General's Office show that the colored population is partly responsible for the higher venereal disease rate in Missouri. But after deducting from the total of the soldiers from the Southern states the rate for colored men, the rate for white men still ran higher than the Northern states.

Between September, 1917, and February, 1919, there were approximately 300,000 cases of venereal disease in the army and navy. Out of this number of men more than 2,000,000 days were lost to the service. The conditions were such that Congress took special interest in the venereal situation and on July 9, 1918, in Chapter 15 of the Army Appropriation Bill, was included an item of \$4,100,000 for the control and prevention of venereal diseases, not only in the army but among civilians. There was a state subsidy whereby Missouri's share in the 1919 funds was \$35,807.91. This money was available on July 1, 1919. There is a like amount available for 1920 if dollar for dollar is deposited by the state.

On Sept. 1, 1919, the department of venereal disease was established under the state board of health. The several activities of this department have been to place in the hands of the physicians of the state, blank forms on which to report venereal disease; to establish free venereal disease clinics and render assistance to those already established; to conduct a campaign of education by means of lectures, motion pictures, lantern slides, and the distribution of venereal disease literature. Cards have been sent to all physicians, druggists, dentists, and

7. DaCosta: Quoted from Pearce.

8. Tizzoni: Quoted from DaCosta, *Modern Surgery*, 1272, 1919.

9. Blumreich and Jacoby: *Ztschr. f. Hyg.*, 29: 419, 1898.

10. Czerny and Maydl: Quoted from Warren.

11. Lahey: *Ann. Surg.*, 54: 612, 1911.

\* Read at the Sixty-Third Annual Meeting of the Missouri State Medical Association, Jefferson City, April 6-8, 1920.



ministers in the state, asking their cooperation in the government and state fight against this age-old evil, venereal disease. We now have in our files, cards signed by more than 1,200 druggists and 3,000 physicians.

The cards from the dentists have not been forwarded from Washington. Practically every minister in the state agreed to cooperate. A card was also sent to all the newspapers published in the state, and 99 per cent. of them agreed not to carry any objectionable quack advertising. In addition to this work, there has gone out from this department more than 100,000 copies of educational pamphlets. Two new venereal disease clinics have been established and three more are in the process of formation.

The reporting of cases of venereal disease by the physicians has necessarily been slow. They have not been previously required to report to the state board of health, and there is a hesitancy on the part of some physicians, due to the old idea of personal privilege of physician and patient. The first blanks on which physicians were to report were sent out about Dec. 1, 1919, so that there are only about three months of accumulated reports at this writing. The tables, however, contain items of considerable interest:

TABLE 1

Disease	White	Colored	Total White and Colored
Syphilis—			
Male .....	423	65	488
Female .....	214	34	248
Gonorrhea—			
Male .....	822	250	1,072
Female .....	191	70	261
Chancroid—			
Male .....	77	31	108
Female .....	3	4	7
Total .....	1,730	454	2,184

TABLE 2

Disease	Stage of Disease		Total
	Infectious	Noninfectious	
Syphilis—			
Male .....	151	84	235
Female .....	51	102	153
Gonorrhea—			
Male .....	407	14	421
Female .....	96	1	97
Chancroid—			
Male .....	37	1	38
Female .....	3	..	3
Total .....	745	202	947

Age grouping in 2,368 cases of venereal diseases:

TABLE 3

Years	No. of Cases	Percentage Cases
Under 15 .....	79	3
15 to 20 .....	512	22
21 to 30 .....	1,223	52
31 and over .....	554	23
Total .....	2,368	100

Marital relation grouping 2,392 cases venereal diseases:

TABLE 4

	No. of Cases	Percentage Cases
Married .....	678	28
Single .....	1,551	65
Widowed and divorced ..	163	7
Total .....	2,392	100

Relative proportion of commercial and clandestine prostitutes. The large number of unknown sources are nearly all reported from the state hospitals from their long standing syphilis. Reports of 652 give the following information:

TABLE 5

Source of Infection		Percentage
Unknown .....	261	40
Commercial prostitutes .....	181	28
Clandestine prostitutes .....	179	27
Spouse .....	20	3
Inherited .....	11	2
	652	100

Wassermanns made to date on 1,714 inmates of the state prison show the following:

TABLE 6

Male Positive	Per Cent.	Female Positive	Per Cent.
453	28	41	44
Neg. 1,167	72	Neg. 53	56
1,620	100	94	100

In order that any communicable disease may be properly handled, it is necessary that reports as nearly accurate as possible, be received by the board of health. Then, when cases are properly reported, the method of isolation or quarantine can be carried out. We know how impossible it would have been to have stamped out malaria from the Canal Zone by treating the victims of that disease; we cannot stamp out typhoid fever by treating those who are unfortunate enough to become infected with the disease, yet they must be treated; yellow fever and smallpox never would have been controlled by administering to the necessities of those infected with the disease, but preventive measures have almost wiped out these diseases. Venereal disease, being a greater menace to health than any of the diseases mentioned above, demands intensive study and careful observation. From a public health point of view, venereal diseases are purely preventable. It is a self-evident fact that every case of venereal disease of tomorrow will be the result of a case existing today, and that the feeble-minded child of tomorrow is a natural product of the venereally infected parents of today. It should be borne in mind that the eradication of communicable diseases is the highest aim of scientific medicine.

## SUMMARY

A study of Table 1 shows 2,184 cases reported, of which 1,730, or 79 per cent., are white; 445, or 21 per cent., are colored; 1,668, or 76 per cent., are male; 516, or 24 per cent., are female; 736, or 33 per cent., are infected with syphilis; 1,333, or 61 per cent., gonorrhea; 115, or 6 per cent., chancroid.

Table 2 shows that in 947 cases where the stage of the disease is given, 745, or 78 per cent., are infectious and, 202, or 22 per cent., noninfectious.

Table 3 shows that more than 50 per cent. are between the ages of 21 and 30 and that 3 per cent. are under 15 years of age.

Table 4 shows the marital relation of 2,392 cases: married, 678, or 28 per cent.; single, 1,551, or 65 per cent. Discounting all where the marital relation was not given, there was 7 per cent. widowed or divorced.

Fifty-five per cent. of the infections were from prostitutes; 28 per cent. commercial, and 27 per cent. clandestine, as shown in Table 5.

From inmates of the state prison, Table 6 shows that out of 1,714 Wassermanns, with no reference to clinical symptoms, the male was 28 per cent. positive and the female 44 per cent. positive.

It has been estimated that more people die every year in the United States as a direct result of venereal diseases than were killed during the war with Germany in the American forces. There should be some method devised to reduce the alarming death rate, and when investigations show that almost 25 per cent. of the inmates of insane asylums are the result of syphilis alone, this is sufficient to justify the introduction of strenuous efforts to control venereal diseases. The individual help of the physicians of the state is vitally necessary for the successful warfare against these diseases.

The State Medical Association, at its meeting last year, indorsed the government's program and now the work has been taken over by the state and the campaign is going forward. A number of medical societies have indorsed the campaign and there is a general feeling that although the movement is new, the opposition has come from individuals who did not know its real purpose.

#### DISCUSSION

DR. DAVID S. BOOTH, St. Louis: The essayist mentions the making of Wassermann tests in the case of inmates of prisons as well as others, from which I take it these are blood Wassermanns. We certainly know by this time that a negative blood Wassermann is not a positive indication that syphilis is not present. This being true, it gives a sense of false security to these people, who are certainly given to understand that this is the case. As an illustration, I had a woman come to me several years ago who said she had been examined by a number of physicians, but she wanted me to examine her and make a diagnosis without knowing anything about what had been done by the others. After physical examination I made a diagnosis of locomotor ataxia, but she said this was impossible as she had had a negative blood Wassermann. On telling her that was not conclusive she consented finally to a complete laboratory examination, which showed a negative Wassermann of the spinal fluid, but which gave increased pressure and globulin content with pleocytosis. The subsequent history was conclusive because she rapidly grew worse and in a very short time was bedfast. She had every evidence of syphilis. I feel that we should not turn these cases loose and tell them they are free from syphilis.

DR. HERMAN S. MAJOR, Fulton: The work which Dr. Russell is doing in connection with the U. S. Public Health Service is very important and should meet with the cooperation of every physician in the state. In the State Hospital at Fulton we began in

December, 1915, to make a complete survey of all the patients in the institution, doing a blood Wassermann on every patient there, with the result that 19 per cent. of the men and about 17 per cent. of the women gave a positive reaction. At that time we were depending almost entirely on the blood Wassermann, but we found that a negative blood Wassermann meant practically nothing. As Dr. Booth has just said, it was no indication that syphilis did not exist, so the routine which we have adopted now is, to do a blood Wassermann on every patient as a routine measure and do a spinal on all patients where it is at all indicated. We find that a great many of the patients to whom we give this test give a negative blood Wassermann but will give a positive spinal fluid Wassermann; and also a great many patients will vary on spinal fluid findings and in these cases we give repeated spinal fluid examinations until we are satisfied with the result. We at first thought this was a fault in technic but found that other laboratories had the same experience. We get a good many patients from the large cities and whenever we get a bunch of them our positive percentage runs higher than when we have patients from the rural districts. The men who are in the army service were imbued with the importance of fighting against venereal disease. At one camp where I was stationed they had about 4,000 men taking treatment. Of course a great many were infected with the disease when they came into the service; not by any means were all infected after they had donned the uniform. In our institution in making out statistical data for the public health service we hardly knew what was wanted, so we went through our records and filled out a card for every patient who had given a positive Wassermann. A great many were old cases that had been there for years and possibly will be there until they die.

#### PREVENTING BLINDNESS IN MISSOURI

F. E. WOODRUFF, M.D.  
ST. LOUIS

The Missouri Commission for the Blind was provided for in 1915 by act of the general assembly. The law creating the commission provided for the appointment by the governor of five commissioners in whom should be vested all powers necessary to the performance of the duties enumerated. The appointments, made Nov. 30, 1915, were the late Charles A. Stix, J. D. Perry Francis, Adolph Michaels, James C. Jones, all from St. Louis, and J. R. Lyell, of Shelbyville. The law inhibits the use of funds for purely charitable purposes, the theory being that the commission shall develop and utilize the industrial capacity of the adult blind, and thus encourage them to useful labor and discourage begging.

The work of this commission must not be confused with the system of state pensions for the helpless blind, recently authorized by constitutional amendment. It is entirely fitting that the helpless blind should be taken care of by pensions—a purely charitable enterprise. But it is nothing less than the encouragement of pauperism to pension the blind who are wholly or partially self-supporting. Hence the commission was established to provide assistance and opportunity only to such blind persons as



are able at least to partially help themselves, and through the aid of medical research and investigation prevent the spread of blindness. Prodigality as ever unwise; but liberality to prevent poverty is wise economy. The state maintains the school for the blind in which the blind child is taught useful employment. But to stop here is to leave the duty half performed, for it is essential that there shall be some avenue into which that child, grown to maturity, may utilize the knowledge imparted to him at the school. His tool is of practically no value to him unless he has the necessary tools and materials and the means of marketing the brooms and other wares which he produces. To aid him at this period in his career is part of the functions of the commission.

The activities of the commission are varied and the blind are taught various trades and taught to be self-supporting. The prevention and relief of blindness have been supervised by a group of leading oculists of the state, who have given their services freely and without charge to the commission. The success in prevention of blindness depends on progress along three lines—legal, clinical and educational.

Much blindness can be prevented by the adoption of regulations requiring an immediate report by the physician in charge to the state board of health, or to this commission, of dangerous contagious eye diseases, similar to the existing regulations requiring like reports of general contagious diseases.

Missouri has only one law on this subject. Under penalty of fine, it requires midwives to report inflamed eyes of new-born infants to some physician. Naturally, the midwife calls on some medical friend who will shield her from unpleasant notoriety and other consequences of her carelessness. The physician is not required to report such a case. The physician called by the midwife may be utterly incompetent to treat diseases of the eye. He may not recognize the seriousness of the condition. Thus, many of these cases continue, only to become blind for life. Over one-fifth of the children in the Missouri School for the Blind have lost their sight from this sort of neglect. This blindness is absolutely preventable by the proper treatment at the proper time.

Trachoma is a dangerous contagious eye disease, which afflicts persons of any age and which may become epidemic in rural as well as congested districts and in schools, prisons, etc. Only by intelligent cooperation between the local physician and the public health authorities can this scourge be effectually checked and great suffering and economic loss avoided. In some sections of the country trachoma has involved more than 50 per cent. of the population before its presence was realized and proper preventive measures were instituted. There is considerable trachoma in Missouri; just how much we do not know, as no reliable report can be had from

outlying sections. The inspection of the schools of St. Louis revealed 525 cases in the last two years. During the current year 110 additional cases were reported voluntarily to the St. Louis Health Department. This probably represents less than one-third of the total number of cases in St. Louis.

The proportion of persons whose eyes are thus infected to the total population is often much greater in the sparsely settled districts than in the cities. Trachoma is curable if proper treatment is begun in the early stages. When neglected, we find life-long suffering with impairment of sight and temporary, sometimes permanent, loss of the individual's ability to gain a livelihood. It is believed that the pauperism due to trachoma costs the people of the state more than the entire expense of the general work for preventing blindness.

To get accurate information and to gain a measure of control, all physicians should be required to report patients afflicted with trachoma to the health officers in their city or county within ten days after their first attendance on such person. This interval is sometimes necessary to allow the physician to make sure of the diagnosis in doubtful cases.

A recent survey was made in certain counties of Missouri to ascertain the prevalence of trachoma among the school children. This work was done by Dr. Raynor of the Surgeon-General's Staff and showed an astonishingly high percentage of this disease to be present. A detailed report appeared in the *JOURNAL* recently. Missouri has no public institution devoted to the special care of those afflicted with eye diseases. Institutions of this kind exist in Illinois, Pennsylvania, New York, Massachusetts, Maine and Louisiana.

The best information obtainable leads to the conclusion that there are in the state approximately 2,700 blind persons, of whom approximately 2,250 are white and 450 are colored, each class about equally divided as to sex.

In order to cope with this situation a limited number of ophthalmologists over the state were invited by the Commission for the Blind to form the nucleus of a consulting staff. A temporary organization was effected with Dr. F. E. Woodruff as temporary chairman and Dr. John Green, Jr., as secretary. A permanent organization was later effected and aggressive work has been undertaken in order that the spread of contagious eye diseases may be lessened, and that the public may be educated regarding the care of such diseases and the prevention of unnecessary blindness. An understanding of the ways and means for the prevention of blindness, a definite plan to eradicate contagious eye troubles, especially trachoma, and a campaign for the relief of refractive errors as well as disease conditions, will very materially lessen and will in time practically eliminate unnecessary blindness in our state. The distinct function of the consulting

staff is one of prevention of blindness while the functions of the commission for the blind include prevention of blindness and the care and education of the blind.

The officers of the permanent organization are: Chairman, Dr. W. A. Shoemaker, St. Louis; vice chairmen, Dr. R. J. Cordy, Kansas City; Dr. Guy L. Noyes, Columbia; Dr. Harold Bailey, Springfield; Dr. F. E. Woodruff, St. Louis; secretary-treasurer, Dr. William F. Hardy, St. Louis.

Metropolitan Building.

#### HYGIENE IN DISPENSARY SERVICE: THE INTERESTS THEREIN CONCERNED \*

GEORGE HOMAN, M.D.  
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Some time ago when, through the courtesy of the Church authorities, an invitation was extended to me to take up the matter of the desired resumption of the medical dispensary service of the Parish of the Holy Communion, the occasion thus presented gave rise to earnest consideration of the question—whether it might not be possible to introduce a feature heretofore almost unknown in such professional work, and which work has very generally taken the form of curative ministrations with the purpose of restoring to persons attending clinics the fullest possible measure of bodily efficiency and earning capacity, if such persons were of adult years.

Such efforts on the part of philanthropists and physicians were made in recognition of needs that were plainly to be seen, and often in the nature of emergency service, first aid to those in trouble, with little or no attention paid to the underlying causes that brought about the conditions presented to and treated by the specialists who constitute the staff of a dispensary organization.

The thought in this connection was whether by hand in hand touch with curative or restorative treatment, it would not be possible to give practical instruction as to the means whereby many such ailments and maladies may be avoided—preventive medicine or public hygiene, in its rapid modern development having become at this time a distinct branch of science, to the mastery of which many men of first-rate abilities are giving earnest and efficient attention.

In considering the various aspects of dispensary work, such as is contemplated here and now, the question naturally arose as to the several parties in interest in such an undertaking, and a few observations on this phase of a great subject may not be out of place, the more so as such mention would be quite in line

with the scientific trend of present times. It will be found that a number of important factors or influences are concerned in an enterprise of this kind and embrace the patient, the parish, the physician, and the public, in operative interest and scope.

Naturally, and in obedience to the Good Samaritan spirit, the patient is the party of first importance, everything centering in efforts to save life, afford relief with restoration to health in the cases of the lame, the sick, the halt, and the blind; and whatever may be the social condition of such sufferers it goes without saying that they shall receive the same quality of professional service and skill as would be given to those of amplest means; the very best that applied science can afford must be at the service of those in need, the humblest freely enjoying the equivalent in medical care of anything that affluence or high social standing may be able to command—for less than this would be inconceivable to the normal medical mind and conscience.

The next in order of interest would be the organization back of the service, in the present instance termed the parish, although it may originate in sources entirely secular, the impulse to benevolence and brotherhood being explained by the spiritual instincts and business methods of the ecclesiastical body in question, which provides facilities, equipment and supplies for the medical undertaking now in hand; and the social, moral and general educational value of such provision and forethought is of no small consequence to a community locally concerned in such form of benevolent enterprise.

Next would stand the physician, for without the aid of a competent staff of medical men engaged in work for the physical and mental betterment of ailing persons, efforts in the direction of religious or moral advancement would in many cases prove futile; but a restoration of bodily vigor, or an assured hope of such, would often prove to be the open door for spiritual teachings that might influence the whole future life of the individual.

It is held as a truism that he who causes two blades of grass to grow where but one grew before is a benefactor to his race, and the same would be true of one who produced two grains of wheat where but one grew before, for in that fact would appear the possibility of doubling the bread supply of the world. Such illustrations emphasize the importance of little things, so-called, and so it may be fairly held that the public has an interest in the service we now propose to undertake; for if, with our help and example, two human lives may be developed in vigor of mind and wholesomeness of body where but one was known before, then such an achievement becomes indeed of commanding public importance, modest withal though its beginnings may have been.

\* Remarks made at the meeting of the new medical staff of the Free Dispensary of the Parish of the Holy Communion, St. Louis, April 5, 1920.



In order to realize a combination of curative and preventive medicine, as has been herein suggested, in useful and workable form, would call for the united efforts of all the staff clinicians who may be available and willing to lend a hand; and the suggestion is submitted for such consideration as its importance may seem to require.

The tendency in intelligent public and personal hygiene is unmistakably toward prevention, which bespeaks the true scientific spirit of today, which takes note of the sum of little things that in their mass action may not only destroy individuals but desolate communities and nations; so then, if "far that little candle throws his beams" it may be true that generations yet unborn may experience in sounder bodies and saner minds the effect of influences set in motion at this time—it may be in fact, that Americans will in time practice the truth conceived, it is said, by the Chinese a thousand years ago and pay to be born right and kept in health and vigor rather than hazard the chances of recovery from diseases now known to be in their nature easily preventable.

#### THE USE OF THE ROENTGEN RAYS IN THE DIAGNOSIS OF CHEST COMPLICATIONS\*

E. H. KESSLER, M.D.  
ST. LOUIS

While presenting to you the use of the roentgen rays as a diagnostic help in chest complications, please bear in mind that I never speak of a "roentgen-ray diagnosis." The roentgenologist does not stand alone. He is one of a group. His findings are to be classed with the laboratory findings, and the ability of the roentgenologist will determine the value of his findings.

In lung work when we are looking for early signs, such as the very early detection of tuberculous infection, we are often uncertain of what we see. There the clinical findings must be considered. The earliest signs on the plate may be only a peribronchial thickening. This may be seen in many other conditions. Again, the diaphragm may be slightly less movable on the affected side. There might be only a very slight haziness or the appearance of light smoke or vapor in one of the apices. The appearance of the least under areation in the upper lobes in patients under suspicion must be considered. Do not think it an easy matter in the earliest stages to say the patient is or is not tuberculous. At conventions I have seen four or five of our ablest men arguing what they were seeing in the stereoscopic plates. You might say, if the able men are uncertain why bother with the roentgen rays? In that early uncertainty lies the best interest of the patient. When the lung con-

dition is such that a plate is not needed, when the process is so far advanced that the fluoroscope reveals the pathology, the acute diagnostician needs no plates, except to show the extent of the invasion or complications. There is no rivalry between the fluoroscope and plates. The fluoroscope shows movement. The excursions of the diaphragm, the heart movements, the splashing free fluid, the expansile tumor over the aorta, are all seen on the screen. To distinguish a gland in the mediastinal space from an enlarged aorta is best done with the help of the fluoroscope. We can turn the patient in all positions to throw the light between the parts. This could be done with plates, too, but the expense would be prohibitive. For early diagnostic conditions the plate is a necessity. Without exception, where the early condition pertains to the lung, the plates should be stereoscopic.

The normal lung markings must be understood. What are they? I might answer that by asking, "What is a normal skin?" The skin of a young person is soft, smooth, feels like velvet, has a rosy look. The skin of an aged person is wrinkled, harsh, atrophied. They are both normal. The age, occupation, and surroundings, influence the lung markings. Occupational diseases may look on the plate typically of tuberculous markings, but the tuberculous clinical symptoms are missing. Syphilis may look like sarcoma on the plate and at times it is necessary to make a differential diagnosis by other means. Roughly speaking, age makes more harsh the lung markings.

*Tuberculous Markings.*—The roentgenologist is not to say whether the lesion is active. The clinician wants to know first, is tuberculosis present? Second, what is its character, distribution and probable activity? If cavities are present, are they well walled with a dense fibrous tissue? If only an old cavity is present that patient is as safe as the wall is dense. Of course, the length of life depends on the constitutional resistance. This becomes of importance when authorities on lung tuberculosis tell us that 100 per cent. of people are now or have at some time of their lives been infected with tuberculosis.

Roughly speaking, the upper lobe, occasionally the middle lobe, and practically never the lower lobes, are involved. The bronchial markings are increased and lead to the lung mottling in the parenchyma of the lung. If the mottling is clean cut the condition might be considered inactive. If there is a gradual fading into the surrounding tissue, activity is considered. Childhood tuberculous markings are peribronchial and glandular involvement about the hili. If the condition is clean cut with outlines sharply defined we consider the condition inactive.

*Heart.*—The heart is examined for size, shape and inflammatory surroundings. The same holds good for the aorta. If the heart is

\* Read before the Medical Staff of the U. S. Public Health Service, St. Louis, May 3, 1920.

hypertrophied or normal, the apex retracts and the size reduces as it contracts. The change of its position is due to the rotation on the great vessels. Shape and position vary with the patient's build. The position can be influenced by pleurisy with effusion, old chronic inflammatory changes, congenital displacement. In effusions the heart outlines are obliterated. The pulsations are lost.

*Lung Tumors.*—Sarcoma, advanced, is seen as dense masses invading the lung tissue. The outline is sharply defined. Tumors are large—3 to 4 inches in diameter. The lung between the masses is normal. Pulmonary symptoms are missing unless disturbance is caused by pressure.

*Carcinoma.*—Carcinoma is usually secondary from a breast or prostate involvement. The beginning is at the hilus and radiates out to the periphery with a hazy outline caused by the congestion or pressure. A characteristic feature is the absence of mediastinal involvement, and is usually seen in lower lobes.

*Pleura.*—A visible pleura is abnormal. In a thickened pleura haziness is marked and when extremely thick it is impossible to distinguish from a pneumonic consolidation. Interlobular pleurisy is seen as a shelf between the lobes of the lung. Effusions into the pleura are easily seen. The upright position will show the fluid level. If the fluid is free, splashing can be seen.

*Pneumothorax.*—Pneumothorax is nicely seen. The lung markings are missing and the lung can be seen retracted. The retracted margin shows as a dense line.

*Abscess.*—Abscesses seldom reach the lung margin. However, it is at times impossible to distinguish between abscess and lobar pneumonia. If after coughing the part involved clears, we have to do with abscess cavity opening into a bronchus. Abscess cavities are capable of spontaneous cure if of short duration and the walls liquefy and are spat up. If of long standing, the walls become fibrous and the cavity is permanent.

*Esophagus.*—The esophagus is subject to disturbances which give rise to symptoms not always easily interpreted. Take, for instance, a patient suffering from pains about the mid-sternal region. Some cough with slight expectoration, regurgitation of part of the food, loss of weight, and a general feeling of distress after swallowing. We know there is an obstruction, but is it a gland? The condition is often a cancerous condition and is nicely seen.

*Vertebrae.*—The dorsal vertebrae are subject to conditions which make the patient miserable. The main symptom is pain. Atrophic and hypertrophic spondylitis may be present. Tuberculous destruction of the vertebrae is not infrequent. In curvature of the spine where the curvature is excessive, pains are often felt on the lesser curvature just below the breast line. Here will be seen an overriding of the ribs, a frictional pain.

*Foreign Body.*—Foreign bodies in the lungs may be opaque or transparent to the roentgen rays, but must be localized. If opaque, they are easily seen when the patient is placed in such a position as to bring the foreign body away from the heart shadow. If transparent to the rays the resulting inflammatory congestion will be seen and the foreign body will be found at the handle of the fan.

*Stomach.*—A stomach is not thought of when we speak of the chest. Later I will show you how a stomach might complicate the chest conditions. Especially is this so in hernias of the diaphragm. Four patients have been referred to me for chest complications in the past year. Each had part of the stomach in the chest cavity.

*Bronchiectasis.*—Bronchiectasis is easily diagnosed. It has a Swiss cheese appearance and cannot be confounded with any other condition.

*Influenza.*—Uncomplicated influenza—please bear in mind the word *uncomplicated*—can be distinguished by the abnormally heavy bronchial markings. Usually throughout the lungs, always bilateral and more decidedly marked in the lower part, diminishing in intensity from the bottom up. In complications the markings will take the character of the nature of the complication. To differentiate an influenza infection with apical bronchopneumonia from apical tuberculosis is difficult. The mottling is so much alike we must wait until the condition begins to clear before being able to make a diagnosis. A helpful point is, to remember that in tuberculosis the bronchial markings are confined to the affected part of the lung, while in influenza the markings are throughout both lungs with the denser markings in the lower lobes.

*Bronchopneumonia.*—In bronchopneumonia there is an irregular, diffuse, peribronchial thickening, so that the individual bronchial outline is barely perceptible. These markings are seen about 3 inches out from the hilus. If these markings spread or become confluent the appearance is one of lobar pneumonia. It frequently happens that one portion of the lung becomes consolidated and if the condition grows worse, the next earliest change is seen on the opposite side extending out from the hilus as in the first infection. There is one sign which is fairly characteristic, noted by Honeij, the diaphragm on the affected side is higher than normal, while the reverse is true in pneumonia.

*Lobar Pneumonia.*—Lobar pneumonia, depending on the time examined, is usually definitely demarcated and limited to a lobe, outlined by the interlobar fissure. The greatest density is at the periphery.

Again, let me say the roentgenologist does not stand aloof or alone. Roentgen interpretation demands a knowledge of pathology and clinical medicine. The roentgen plate may supply the data, but we see only what we have learned to see.



# THE JOURNAL

OF THE

## Missouri State Medical Association

JUNE, 1920

### EDITORIALS

#### DR. J. W. FERGUSON, PRESIDENT

In electing Dr. W. J. Ferguson of Sedalia to the presidency of the Association, the House of Delegates conferred this high honor on a member who has long been identified with the activities of the organization and whose influence has extended into many avenues removed from the immediate field of medicine to strengthen the medical laws and expose quackery, and who has been ready at all times to give his time to the affairs of the Association. In the work of his county medical society Dr. Ferguson has been a valuable factor, having served as its president and on numerous committees.

After graduating from the Kansas City Medical College in 1887, Dr. Ferguson entered practice at Sedalia, where his father was an active practitioner for many years. He has been identified with movements looking to the improvement of public health conditions, and was city physician for a number of years. In 1917 Governor Gardner appointed him a member of the state board of health, and he was elected president of the board in the same year. As councilor of the Seventeenth District, to which office he was elected in 1915, he exercised a salutary influence in the affairs of the members throughout that district and faithfully attended all meetings of the council, while as a delegate to the American Medical Association in 1918 and 1919 he gave to that office his whole-hearted attention. During the war he accepted a commission in the Medical Corps of the Army with the rank of captain.

Dr. Ferguson is thoroughly familiar with the aims and purposes of the organized profession, and his long experience in the affairs of the Association have prepared him to fulfill the duties of the office of President with foresight and vision that must tend to enlarge the usefulness of the organization and reflect credit on himself and the profession.

#### BETTER OBSTETRICS

The recent publication of the *Bulletin* of the Division of Child Welfare of the Bureau of Labor—a very appropriate branch of the gov-

ernment for such statistics—gives a startling answer to the question, "Is it worth while?" as shown by the following quotation: "It is affirmed that in five counties selected at random from various sections of the United States the maternal mortality has in ten years gone up from seventeen to the thousand to twenty-one to the thousand; and that out of 167 births of living children ninety-five babies died within the first four weeks of life."

If the United States is to survive as a nation, we must conserve our population by not only keeping up the birth rate but by saving the babies which are brought into the world alive.

Three years ago Dr. George C. Mosher of Kansas City called attention to the various agencies at work which are reducing the population: (1) Decrease of marriage among native born persons; (2) decrease of the size of families among the same element of people (in Massachusetts the records show that in forty years the average size of the family has shrunk from seven and a half children to less than three); (3) the increase of divorce, which, according to statistics, is alarming. Here in Missouri the courts grant divorces to applicants in the ratio of one divorce to eleven marriages. Scores of separations are decreed in the recess of routine trials adjourned for the lunch hour, according to the newspapers. While all these matters are sociologic and not in our distinct province, they increase the menace which we are facing and as citizens we are bound to consider their influence on our country's future problem. Now, if the nation is thus approaching the condition of France, where the government a few years ago offered prizes for families of over three children, why shall we not by organization attempt to stem the tide which must, if allowed to sweep on to the ultimate conclusion, bring us to the decline and fall of America?

Such thoughts influenced the organization of the Obstetrical Section of Jackson County Medical Society ten years ago and during its existence it has strengthened the influence of its members by close acquaintance, friendship and loyalty, and promoted scientific methods in obstetric practice.

A schedule of minimum requirements, issued several years ago by the Section, was accepted by several hospital superintendents and is today followed as a guide for the conduct of cases in the maternity departments. The members have taught nurses and interns the value of external examination of patients so that the McDonald and Ahlfeld dimensions, fetal heart, blood pressure, rectal touch to determine height

of presenting part and degree of dilatation, are as familiar to them as to the average physician, and they are thus informed for the benefit of the attending man, and their own education is also advanced in the diagnosis of these conditions.

The standardization of the treatment of eclampsia and pre-eclamptic conditions in Kansas City owes much to the members who have classified their results and published them in the *Bulletin*, the state JOURNAL, and other publications.

The wearing of rubber gloves and duck suits in the lying-in room has been made not only free from the jest of being conspicuous but now is demanded by patients themselves, even in cases treated at home, when these means of protection are overlooked.

The opinion of an obstetrician as to the need of cesarean section is now insisted on by a number of our best surgeons before beginning an operation of this class. This recognition of obstetric diagnosis is not only in itself gratifying but often it results in valuable assistance to the surgical treatment of borderline cases.

Prenatal care is becoming more and more the usual routine and our prospective mothers are given advice and measurements recorded for the use in their labor which a few years ago were not considered necessary but which now are universally expected.

DeLee's Year Book has for three years recognized the contributions of the members of the Section to obstetrical literature by publishing each year from three to six abstracts of the articles they have written.

Pernicious vomiting, the *bête noir* of the management of pregnancy, has been given a great deal of attention by members of the Section and it is hoped these researches will be grouped by another year and tabulated for publication.

The ten years of the Obstetric Section of the Jackson County Medical Society certainly have made history in this branch of medicine. We congratulate our members on the results and urge that they ever press on toward the goal of better understanding, better diagnosis, better work, and still better babies for the coming generation.

#### AN EPOCH-MAKING HEALTH BILL

In a Health Center Number of the New York Charities Aid Association *News* publicity is given to the Sage-Machold Health Center Bill which recently has been introduced in the two houses of the New York state legislature. This bill, because of its comprehensive extension of

public health work particularly to rural and industrial communities, promises to give spirit and character to state public health legislation for a generation. Its passage is regarded as assured.

This legislation it is expected will follow as a natural consequence to the public health law enacted in New York state in 1913, closely followed in the Missouri law which was enacted in 1919 and only recently going into effect. The New York bill provides for ample state financial and cooperative assistance to counties and cities through the establishment of a state-wide system of health centers and is in line with the recommendations of the subcommittee on health of the governor's reconstruction commission.

Mr. Homer Folks, secretary of the State Charities Aid Association, writing on the effectiveness of the provisions of the bill, says:

It will carry to the people of the country and of the small towns the advantages which a few of the well-to-do ones come to the big cities to receive, but which most people do without, and, doing without, suffer from an enormous amount of needless disease, and are cut off untimely.

State Senator Sage, speaking of the dearth of physicians in rural communities in New York, says:

The number of physicians in practice in rural districts is steadily decreasing; in fact, in some of the smaller and more remote communities the number has reached the vanishing point. It is said, too, that the quality of men who are taking up the study of medicine has deteriorated, due in part to the fact of too long and extensive training required before admission to practice and because the rewards of medical practice are not commensurate. Forty-eight districts of the state have applied to the state health department to send them physicians, as these districts were without medical service.

Such conditions pertaining to medical service in rural communities exist in Missouri and will grow worse as the older country doctor passes away. Will Missouri follow the lead of New York? There is evidence that it will. The motion passed by the Missouri State Medical Association, indorsing the movement for the adoption of a mill tax amendment to the state constitution providing for state and county public health work, is significant. The health education program of the Missouri Tuberculosis Association exhibits the interest of that laymen's organization for promoting public health work and legislation, which likewise is significant.

The work in child hygiene now being conducted in Missouri by the U. S. Public Health Service, with the collateral associate cooperation of the Missouri Tuberculosis Association



and the help of other organizations and institutions in connection with the organization of the Division of Child Hygiene of the State Board of Health, in which health centers are being organized, promotes such legislative effort.

According to the State Charities Aid Association *News*, the Sage-Machold Bill makes provisions as follows:

1. Makes it possible for a county, city, or consolidated health district to establish and maintain one or more health centers and provides state aid therefor.

2. Authorizes the board of supervisors of a county and common council or board of estimate of a city to establish one or more health districts, create for each district a board of health of five members which appoints a full time salaried district health officer.

3. The object of the health centers and the proposed district health organization is to meet the problem of medical care in rural communities and industrial centers. There are provided at each health center for the treatment of sickness and the prevention of disease adequate hospital, dispensary, diagnostic, nursing and social facilities.

4. Each health center is administered by a board of managers of seven members appointed by the board of supervisors of the county or the common council or board of estimate of a city, with the approval of the state commissioner of health. The board of managers appoints the salaried medical superintendent of the health center.

5. A health center may consist of any one of the following, or any combination thereof:

(a) A general hospital especially established for the purpose or any existing hospital or working arrangement with any existing hospital or hospitals.

(b) Out-patient dispensaries which may include any of the following types of clinics: Maternity, prenatal, child welfare, tuberculosis, venereal disease, mental hygiene, school children, dental clinics, and general medical, surgical and diagnostic clinics.

(c) Laboratories for clinical, bacteriological, chemical, and roentgen ray, auxiliary to the laboratories of the state department of health.

(d) Public health nursing service (including school nursing), for the discovery of communicable or other diseases, for visitation of such cases, and for follow-up work with patients discharged from the health centers.

(e) Cooperative effort with the state and local education authorities in the medical examination and treatment of school children.

(f) Periodical medical examination for residents of the health district who desire it.

(g) The center may serve as a headquarters for all other public health, medical, nursing, and welfare agencies in the district desiring to make appropriate use of such facilities.

6. All facilities of the health center shall be available to any person in the district in need of medical and surgical care; a moderate fee covering actual cost is charged if the patient is able to pay, but free treatment is provided for any case where necessary.

7. Authority is given to the state to make annual grants of funds to construct, equip and operate the health centers. These amounts are to be supplemented by funds provided by the board of supervisors of the county or the common council or board of estimate

of the city and by fees charged patients. The health centers are authorized to accept gifts, donations, or bequests of funds or property.

8. In general the establishment and operation of the health centers and administration of the health districts is under the supervision of the state commissioner of health. The state department of health is authorized to make available to the health centers the services of medical, surgical, diagnostic and consulting experts.

9. Physicians, surgeons and other experts, whether local or visiting, shall be properly compensated for their services. Local physicians may avail themselves of the laboratory and other facilities of the health centers in their general practice.

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## OLD AGE

The problem of when a man or woman is old is one that has engaged the attention of many medical men, and especially in the last decade has the problem received many interpretations, varied and of engaging interest. Within the last month or so there have been published Walsh's "Yours for Sleep" and "Health Through Will Power," Lacassagne's "La Verte Vieillesse" (Vigorous Old Age), Kelly's "The High Road to Health," and others of equal importance, the object of each being to instruct the reader how best to live so that the bugbear of all mankind—old age—will be delayed as long as possible. In fact, the two problems that bloom perennially, judged by the amount of literature that is put forth on each subject, are how to avoid old age and how to avoid sexual diseases, or rather how to be so hygienic, sexually speaking, that no thought will be given the sexual act. On both subjects there is enough diversity of opinion to cause a deep interest to be manifested by the reader and enough perturbation of thought to throw him into a state of great excitement if he is emotional and easily impressed, or cause stimulation of his risibles if he is a scoffer and beyond redemption. Nevertheless, each book has its special message, and this message is not without significance, for it may be just the sort a certain reader or a certain set of readers think they need. Therefore it behooves us not to pass over these publications as if they had no merit, fluff the pages and condemn the book. In this spirit, and open-minded to a degree that cannot possibly be construed as influenced in the slightest way by personal prejudices, we shall endeavor to set before the reader the salient features of Lacassagne's "Vigorous Old Age," just published in Paris, and which no doubt will appear in English dress before long, since it is worthy of translation, not only on account of its distinguished author, but because of its historic interest and its literary merit.

According to Lacassagne, we have nothing to complain of in regard to the appearance of old age, since statistics show that before 1789 middle age was around the twenty-eighth year and in 1881 in the neighborhood of 40. This must be true, otherwise Balzac's novel, "A Woman of Thirty," would not have created so great a sensation when it was published, this novel showing that a woman so mature (?) had not written the last chapter in her sexual life. "Today," says Lacassagne, "a woman of forty is just about ready to make the real début of her earthly existence." Standing foursquare on the premise that old age has been deferred to an extent unheard of before, he does not hesitate to state that in his opinion the springtime of old age is from 60 to 70; the autumn from 70 to 75, and the real winter from 75 to 80!

A cheerful bit of medical "news" is this matter of how, despite the wear and tear of modern life, old age has been deferred. We had thought after reading the Cassandra warnings in the American medical press and also the Job-like lamentations, that we were doing all that we could to bring on old age at an early period in our careers; in fact, were so ambitious to "scream" our way through life in breathless pursuit of money and notoriety that we really desired its advent long before it was ready to swoop down on us. In every article we were held up to scorn: a pattern of asininity for future generations to shun. That we paid scant attention to the warnings and lamentations—allowed our sense of humor to obtrude itself and thus restore our equilibrium—would be stating an untruth; for so serious were the articles, in fact so lugubrious, that even if humor had attempted to edge its way into our thoughts while digesting the weighty articles, it would have fared like all intruders—it would have been made most unwelcome. But it was not enough to tell us that our manner of living was the poison that was the cause of graying hair, stooped shoulders, hardened arteries and the other concomitants of old age; directly the profiteers joined the drama of life as its chief actors, our medical writers were in reach of another factor that would undoubtedly gray our hair more, stoop our shoulders more and harden our arteries as they were never hardened before. In a word, we were wept over, after having been scolded, and were told that ours was the most helpless case known in the history of man to remain youthful in circumstances that brought on high blood pressure from agents from within and without.

Thanks to Lacassagne, there is an encouraging rift in the tenebrous night, and at last a hopeful note has been struck by an orchestra that has hitherto doled out only the most melancholy music. And it is not strange at all that Lacassagne should be the optimist that he is. He lives in the "City of Light," in an atmosphere that makes for optimism. The air he breathes and the thoughts he thinks are the air breathed and the thoughts thought by all intelligent Frenchmen who even today, despite the ravages of the Great War, are ready smilingly to face the reconstruction of their devastated country with no pessimism to stay the ready hand or to slug an active mentality. Better indeed the cheerful tone of Lacassagne's book, though it may be pronounced unscientific by those who are wedded to gloom on account of too thorough a saturation in the writings of supposedly scientific medical men, than the messages we have been accustomed to, chilled and weighted down by the mould of an early grave. Victor Hugo at 70 in full possession of his mental and sexual powers, and Sarah Bernhardt at 75 playing Racine's tragedy in five acts, "Athalie," at the present moment at her theater in Paris, and in a manner that discounts her best efforts in her youthful days, are exemplars of deferred old age which it would be well for all to study as a pleasant chapter in the midst of the present "encircling gloom."

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### THE KOCH HOSPITAL

Now that matters have quieted down in regard to the proper conduct of the Koch Hospital at St. Louis, it would be meet to consider the pros and cons in the recent controversy in a calm and unprejudicial manner. All public hospitals and sanatoria are subject to criticism, sometimes from the public and again from the patients. A hospital or a sanatorium that caters to the city's poor or homeless lives continually under the "fierce light that beats on a throne," and its slightest mistake in management, its neglect of any one of the "virtues" which should constitute the web and woof of the clean cloth for public inspection and public judgment, invites criticism of a drastic nature. This is never the case when an institution is private but always obtains when it is public. Hence those officials who guide the hospital ship or the sanatorium ship should be chary of even the slightest mistake—even though when controversy descends on their heads they may justify themselves by entering the plea that on account of funds it



was absolutely necessary to curtail this or that hospital "luxury."

In the case of the Koch Hospital the criticism which emanated from a dissatisfied patient is a negligible quantity; but what is not so negligible is the fact that long before this criticism was made public the men at the head of the institution did not see fit to rectify matters *sub rosa*, and thus prevent the matter from being aired in the press and brought to the notice of the Grand Jury. Directly charges and countercharges are made in any controversy the public is in a quandary as to who is telling the truth, and the attitude of saying, as the elder Vanderbilt did, "To h—— with the public," is not an argument but a rather uncourageous way of hedging the subject. And especially is the public deeply concerned in the matter of the proper conduct of a municipal tuberculosis hospital, for the reason that one's sympathy always goes out to the incapacitated—the men minus—and also because the thought prevailing today, not only among the medical profession but also among the intelligent members of the laity, is that all tuberculous patients should be isolated, the rich and the poor, if we would prevent the spread of the white plague. Admitting that this thought is founded on scientific and highly intelligent grounds, it behooves us, after preaching this sort of advice to the tuberculous, to give them the best at our disposal, especially when it is a matter of inducing the poor to go by all means to a municipal tuberculosis sanatorium, with the promise that their food will be better, their hygienic surroundings will be better, and the general morale of their new home will be better than obtained in their own squalid quarters.

Every tuberculous patient, no matter how poor he is, is part of our social system and a possibility of becoming under proper treatment and careful nursing an entity of society who will be self-supporting and therefore no longer a drag on our social progress. This thought should be uppermost in the minds of the officials who shed the rays of their intelligence on how a municipal tuberculosis sanatorium should be conducted and not the thought that it will rebound to their credit to cut expense so that the showing at the end of the year will indicate the strictest economy. The idea today is to give the man minus a chance to live and be a credit to society—be of worth to himself and to the world at large. Hence the bickerings of nurses, officials and patients have no value in setting before the two great publics—the medical and the general—the one and only idea which should constitute the foundation on which every munic-

ipal tuberculosis sanatorium should be builded—the idea of humaneness, the best of food no matter what the market price, and surroundings inside and outside the institution which shall bring health and happiness to each patient.

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#### AMERICAN MEDICAL ASSOCIATION ANNUAL MEETING

The New Orleans session of the American Medical Association attracted a much larger number of Fellows and visitors than had been anticipated owing to the general impression that the hotel accommodations would be inadequate for the occasion. The registration was 3,681, and apparently everyone was well taken care of. Certainly in the matter of entertainments and historical interest the visitors were fully gratified, the profession of the Crescent City receiving many expressions of appreciation and praise for the excellence of the arrangements. The principal entertainment feature, the Carnival Ball, was a spectacle that few cities could duplicate and in its presentation by about 200 physicians in costume, partook of the spirit of the Mardi-Gras Carnival. It was followed by a masked ball into which many novel features had been injected which added materially to the enjoyment of the occasion. Another charming entertainment was the outdoor party, the grand Fête Champetre and Pageant at the City Park.

The presence of several foreign visitors representing the medical professions of Great Britain, Belgium and France, lent an international air to the scientific sessions where these visitors spoke and they were given a very cordial reception.

In the House of Delegates several important matters were discussed, among them compulsory health insurance, the opposition to which crystalized in the adoption of a strong resolution against any form of compulsory health insurance; a very comprehensive report on the use and abuse of narcotic drugs; and a motion urging Congress to appropriate funds for the publication of a medical history of the World War. All the delegates from Missouri were present and there was some talk about inviting the Association to meet in St. Louis in 1922. There are at present a total of 83,338 physicians who are members of the constituent state associations, this number representing the total strength of the national organization. Of these, 45,266 have enrolled as Fellows, Missouri having a total of 3,402 members of the organization with 1,529 Fellows; out of that number 124 registered at the New Orleans session.

In the scientific sessions nineteen Missouri Fellows were on the program to read papers. Dr. F. C. Neff of Kansas City was elected chairman of the Section on Diseases of Children, and Dr. H. W. Soper of St. Louis, who was secretary of the Section on Gastro-Enterology and Proctology last year, was elected vice chairman of the Section. The honor of being elected president elect fell to Dr. Hubert Work of Pueblo, Colo., who has for sixteen years been identified with the work of the House of Delegates, first as delegate, later a member of the Judicial Council and for the past four years speaker. Dr. Isadore Dyer of New Orleans was elected vice president, the House having abandoned the former practice of electing five vice presidents. Dr. Alexander R. Craig was re-elected secretary and Dr. W. A. Pusey of Chicago was re-elected treasurer. Dr. Dwight H. Murray of Syracuse, N. Y., vice speaker, was elected speaker and Dr. F. C. Warnshuis of Grand Rapids, Mich., secretary and editor of the Michigan State Medical Society, was elected vice speaker. Boston was selected as the place of meeting for 1921.

During the sessions of the House of Delegates there was some talk of making preparations to invite the Association to meet in St. Louis in 1922 and since the adjournment of the meeting we learn that our members in Kansas City contemplate offering a similar invitation from that city. This is evidence of a wide-spread desire for the honor of being host to the organization in that year and ought to culminate in the choice of one of these great cities.

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### IMPROVEMENT IN HOSPITAL SERVICE

Every state medical association in the United States has its part in the present universal movement for the betterment of hospital service. Every association now has its own committee which is studying the hospital situation in its state in cooperation with the Council on Medical Education of the American Medical Association. The Council has obtained through reports, correspondence, and other methods, data relative to all hospitals in the country and each state committee has been supplied with the data relating to the institutions in its state. Through their closer familiarity with the hospitals or by inspections the state committee is in excellent position to verify these data and to make a reliable report to the state association and to the Council.

For convenience and in order to secure uni-

formity of reports from the forty-eight committees regarding the relative efficiency of hospitals, blanks furnished by the Council call for a rating of all hospitals in classes A, B and C, grouped also according to the special class of patients cared for. This rating is not for publication but will aid the Council in the preparation of a list of hospitals which are considered worthy of approval. These lists are subject to frequent revision so that names of other hospitals can be included as soon as sufficient improvements are made to warrant their being approved. State committees are urged to promptly report to the Council any instances where such improvements have been made.

The purpose of the work is to aid the hospitals in providing for their patients the best possible service and in no way to injure those which are honestly endeavoring to provide such service. Toward this end, every possible assistance will be given to individual hospitals by the Council or by the local state committee in establishing such changes as will make them worthy of approval.

Forty-two state committees have reported progress in connection with the latest survey and thirty-four have turned in reports regarding hospitals inspected and graded, which have more than half the entire bed capacity of all general hospitals in the country. Meanwhile, this work of the Council is not conflicting with or duplicating the splendid work being done by the American College of Surgeons, the Catholic Hospital Association, the American Hospital Association, or other agencies. In fact, the work of each agency is evidently complementing that of the others.

At the New Orleans meeting the House of Delegates of the American Medical Association registered an intense interest in the improvement of hospital service and authorized the trustees to generously provide for that work. This work has been so intimately related to that of the Council on Medical Education that the name of the Council was changed to the "Council on Medical Education and Hospitals."

In brief, further enlargement of hospital work by the American Medical Association is assured and in this work each state is destined to have an important part. Toward this end each association is urged to make its hospital committee permanent and to retain on it those who will not only be active but who also can do the work in the most efficient and unbiased manner. Hospitals, at present, form the closest link between the medical profession and the public and the medical profession should do all it can to aid the



hospitals to provide the very best service possible.

The hospital committee for Missouri consists of the following: Dr. H. E. Pearse, chairman, Rialto Building, Kansas City; Dr. M. B. Clopton, Humboldt Building, St. Louis; Dr. C. H. Neilson, Humboldt Building, St. Louis.

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### THE AMERICAN SURGICAL ASSOCIATION

Under the presidency of Dr. George E. Brewer of New York the American Surgical Association met in St. Louis, May 3, 4 and 5, for the first time in sixteen years. The attendance was gratifyingly large, ninety-five members being present, and the program as a whole was stimulating, instructive, and interesting.

The first morning was devoted to a symposium on acute and chronic empyema. This symposium was opened by Prof. Theodore Tuffier of Paris, who spoke in English and outlined in very lucid fashion his experiences with empyema as encountered in soldiers. Drs. Ashurst, Bunts, Martin, Davis, Lillienthal and Heuer all contributed papers on the subject of empyema. While the material submitted added nothing startlingly new to the recently developed chapter on empyema, the morning was a most valuable one in that it confirmed most of those principles which the war has demonstrated to be fixed and which may be regarded as having been established since 1914.

Tuesday morning was given over to the discussion of goiter and was participated in by Drs. Crile, Freeman, C. H. Mayo, Terry, Judd and Porter. Clear-cut distinctions were drawn between so-called essential hyperthyroidism due to diffuse hypertrophy of the gland and adenoma of the thyroid with hyperthyroidism. The essentially important point brought out by this symposium on goiter was that although operative interference when indicated seems to be the most efficient form of therapy, there still remain many moot points in the goiter problem.

On Monday morning, Tuesday afternoon, and Wednesday morning, the program was an extraordinarily varied one.

By no means the least attractive part of the meeting was the social side. The wives of many of the members attended, being adequately looked after by the St. Louis ladies. For Monday evening the St. Louis Surgical Society tendered a dinner to the American Surgical Association and the St. Louis Society for Internal Medicine, the wives of the participants being included in the invitation. Tuesday night the

regular association banquet attended only by the members of the American Surgical Association was held at the University Club. It was gratifying to learn from most of the visitors that the St. Louis meeting was one of the most successful ones from every point of view that has been held in many years.

Several new Fellows were elected, among them Dr. M. B. Clopton and Dr. Evarts A. Graham of St. Louis. Dr. John D. Roberts of Philadelphia was elected president and Dr. H. G. Mudd of St. Louis was elected one of the vice presidents. The next meeting will be held at Toronto, Canada.

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### MOVEMENT TO INCREASE SALARIES AND EXTEND FACILITIES AT ST. LOUIS UNIVERSITY SCHOOL OF MEDICINE

Alumni and friends of St. Louis University have launched a movement to provide the institution with a \$3,000,000 endowment fund in commemoration of its first 100 years of service in the field of higher learning. The income on one-half of the fund sought will be used in increasing the salaries of professors in the schools of medicine, dentistry, commerce and finance and the institute of law. This, together with a fund of \$250,000 to provide a new laboratory for the school of medicine, is classed by William F. Robison, S.J., president of the university, as an immediate need. A total of \$550,000 of the fund, after immediate needs have been cared for, will be used in establishing new clinics and erecting new buildings for the schools of medicine and dentistry.

St. Louis University opened its first school of medicine in 1836. The institution was founded in 1818 and received its charter as a university in 1832. The first faculty of medicine continued to function until 1855 when it was separated from the university. In 1903 the Beaumont Hospital Medical College, named after Dr. William Beaumont, a distinguished member of the university's first faculty of medicine, was acquired by the institution together with the Marion-Sims Medical College, which previously had been combined with the Beaumont Hospital Medical College.

The school of medicine of the university has been running up large annual deficits during the last five years, the largest deficit being that for the school year ending in June, 1919, when receipts were more than \$20,000 less than expenditures. The university at present has no endowment fund, having gone on since its estab-

lishment financed by the fees received from its undergraduate body. This it has been able to do because a large majority of its professors in the departments other than the schools of medicine and dentistry are members of the Jesuit order. The time has come, however, when the fees of students do not care for the expenditures necessary to the proper support of the university.

In the report of the Carnegie Foundation for 1910, Dr. Abraham Flexner, in speaking of those schools of medicine that by "a careful selection of their students and extraordinary pains in teaching make the most of the situation," said that perhaps a dozen institutions in the United States belong with greater or less right to the category under consideration. "Handicapped, though some of them are," the report continues, "in one respect or another, by resources inadequate to the ambition and competency of their faculties and by a student body of somewhat uneven composition, St. Louis University affords an excellent example of a brave, uphill contest, by no means barren of result. Unable for the moment to do all that it wishes, it has, like a good general, concentrated its efforts at critical points. It secures a pervasive, scientific atmosphere in the first two years through the intensive cultivation of anatomy and physiology. The productive department thus created has invigorated the entire school on the laboratory side. To the school just described we must look for such further facilities in high-grade medical education as the country still requires. Their ideals are correct: they lack only the means; and these they have already in comparative poverty, shown the capacity to use."

George W. Wilson is treasurer of the Centennial Endowment Fund Committee which has opened headquarters in the administration building of the university, Grand Avenue and West Pine Boulevard, St. Louis. The campaign to realize the endowment is being extended into every state in the Union.

### CHIROPRACTORS CONVICTED

A bitterly fought trial of Klopp & Klopp, chiropractors of Independence, ended in the conviction and fining of the defendants when the jury after a few moments' consultation found them guilty of practicing medicine without a license, on May 3. The charges were brought by Dr. F. L. Cook, health commissioner of Independence and chairman of the local board of health. The trial aroused a great deal of interest among the physicians in Jackson

County, and was attended by numerous devotees of the chiropractic faith. As is customary in such prosecutions, the chiropractors were represented by an attorney from Wisconsin, said to be employed for the purpose by an association of chiropractors, who presented the stereotyped appeal that the method employed by chiropractors was not a violation of the medical practice act because their ministrations consisted merely of adjustment of the vertebrae. The county prosecuting attorney replied to this specious argument with a clear-cut statement that it was the duty of the jury not to consider whether the state did right in refusing to license chiropractors, but simply to determine whether or not the defendants were complying with the state law requiring medical practitioners to have a license from the state board of health. The case had been tried in March, but the jury failed to agree at that time. Klopp & Klopp filed a notice of appeal and continued their practices, but Dr. Cook promptly filed new charges against them. This determined attitude of Dr. Cook and the efficient handling of the case by the prosecuting attorney, discouraged the chiropractors so thoroughly that their attorney advised them to pay the fine and quit the business, which they agreed to do.

What "chiropractic" is has always been a mystery to the physicians, although there is no difficulty in understanding what "chiropractors" are. It is therefore quite appropriate here to give the definition of chiropractic as laid down by the legislature of New Jersey in the act to regulate the practice of chiropractic in that state recently passed and signed by the governor of New Jersey. We find the definition and comment on its clarity and logic in *The Journal of the American Medical Association*, May 15, as follows:

Definition of Chiropractic: The term chiropractic when used in this act shall be construed to mean and be the name given to the study and application of a universal philosophy of biology, theology, theosophy, health, disease, death, the science of the cause of disease and art of permitting the restoration of the triune relationships between all attributes necessary to normal composite forms, to harmonious quantities and qualities by placing in juxtaposition the abnormal concrete positions of definite mechanical portions with each other by hand, thus correcting all subluxations of the articulations of the spinal column, for the purpose of permitting the recreation of all normal cyclic currents through nerves that were formerly not permitted to be transmitted, through impingement, but have now assumed their normal size and capacity for conduction as they emanate through intervertebral foramina—the expressions of which were formerly excessive or partially lacking—named disease.

Lucidity itself! The New Jersey legislature said, "Let there be light on Chiropractic"—and, behold, it



became the "art of permitting the restoration of the triune relationships between all attributes necessary to normal composite forms, to harmonious quantities and qualities . . ." Simplicity to the *n*th power. Bring on your Einstein theory—the New Jersey solons may oblige with a snappy definition.

## OPINION AND CRITICISM

### A NOTABLE BIOGRAPHY

No doubt to you as a medical man Walt Whitman means nothing or, to be more charitable, means so little that you soon dismiss his name in conversation with the flippant remark that "you once tried to read his stuff but it was too much for you"; or words to that effect. Now this is a mistake on your part that needs correcting at once. True, Walt Whitman was a poet who wrote verse that is unconventional as regards form and ideas; he was greatly misunderstood during his life by the public in general, just as you misunderstand him today; his message to the American people was scorned and neglected. But the few who grasped his ideas at once—Emerson in this country and John Addington Symonds in England, to mention only two of his enthusiastic supporters—read deeper into his poetry than did the superficial critic or reader and realized that the message of Walt Whitman had outstanding qualities that should arrest the world's attention. That they were right has been proved ever since the publication of the first edition of "Leaves of Grass," for Whitman's fame as the greatest American poet has grown mightily in the last two decades, especially a few years before the Great War and most pronouncedly during the war and since. Not as a poet only but as the bearer of a message to the world of today of such importance that to belittle it would be to go against the whole philosophy of our manner of living, our innermost thoughts, our sense of patriotism, and our large, healthy, and unhampered views of life.

To win the reader over to our point of view it is not necessary for him to read "Leaves of Grass," or reread the book in the hope of getting a semblance of our opinion from the endeavor. What is necessary for him is to read carefully "Walt Whitman: The Man and His Work," by Léon Bazalgette (Doubleday, Page and Company, Garden City and New York), and realize what manner of man Whitman was and the great good he did for the world during his life and the great good he is doing for us today. This book reads very well indeed, thanks to

the excellence of the translation from the French by Ellen FitzGerald, who has converted the French biography into the sort of English that is rarely found in translations, and who has not stumbled over those French idioms which are Waterloos to so many translators. But to return to Whitman as exemplified in this book: the philosopher of high ideals whose "thunderings" were not uttered for sensational purposes or to attract attention, but were given forth to arouse the American people from the apathy of artificiality into which they had allowed themselves to sink. Whitman saw that Nature was being treated with scorn and contumely; saw that fresh air and life in the open were shunned; that the artificialities were prosecuted to the destruction of the moral and physical well-being of his countrymen. Hence his voice was raised, uncouthly let us say, against the menace which he knew would ruin his beloved people, and his "yawp" became the joke of the day. But the "yawp" has been effective ever since, perhaps not so effective in this country as it should be, but in England and in France. Hence the greater appreciation from abroad as is instanced in Bazalgette's biography, which was originally published in Paris in 1907.

It has been said, not once but many times, that during the Great War the youth of France got its sustenance from Whitman's poetry and that no poem was so popular with the *poilu* as the "Wound Dresser" from "Drum-Taps." This "rumor" is substantiated in "Young France and New America," by Pierre de Lanux. Lanux further states that "Walt Whitman's blood runs in the veins of the young writers of France, and was infused there through more than one channel. We first knew "Leaves of Grass," thanks to the translation by Léon Bazalgette which was published by the *Mercur de France*, then we read it in English. . . . But his [Whitman's] influence on a few poets is small, compared to his action on the mentality of the young in general. . . . It is an immensely renewed inspiration which is proposed by this American, and which is one of the treasures of our time."

And now we know that Lanux's opinion though enthusiastic pales before the glowing tribute paid to Whitman in the biography before us, for the flesh and blood Whitman stands before us in all the nakedness of his being—and a formidable figure he is. The larger humanity is embodied in him; the right to freedom of thought and action; the one thought to better mankind by instilling clean thoughts as to the manner of living. The candor and uncouthness

must be forgiven one who uses so large a canvas for his illustration of his philosophy of life; and the candor and uncouthness are admirable in this, that without both the philosophy would not be so convincing. That Bazalgette has grasped the main currents of Whitman's remarkable mentality is beyond a doubt, but what is more noteworthy still is that a Frenchman, no matter how intelligent, should be able to interpret life as it was in this country during the time of the poet, and show in what respects it influenced him, even moulded his thought for a time, and then was instrumental in bringing on the revolt which happily for us is our heritage today. No biography written in recent times is more worthy of study and rereading than is this book, and even though physicians may on first thought prefer the recently published life of Pasteur ("Pasteur: The History of a Mind," by Emile Duclaux), we make bold to say that directly they read "Walt Whitman: The Man and His Work" they will decide to place these two epoch-making biographies on the same shelf; and not far apart, either. P. S.

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## NEWS NOTES

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DR. KATE C. SPAIN of St. Louis was severely injured on April 22, when an automobile struck her as she was crossing the street.

DR. M. B. HARUTUN of Joplin was elected commissioner of health for Joplin and has appointed Dr. J. A. Chenoweth city physician.

ON April 23, the state board of health revoked the license of Dr. John W. Jeans of Prosperity, for a period of ten years for writing prescriptions for narcotics illegally.

A LETTER from I. C. Canada, druggist, at Nelson, Mo., tells of the need of a physician in that town, owing to the death of one of the former physicians. Mr. Canada says an active man who can do general work in a large territory will find a good opening.

MR. F. J. KLOPP, a chiropractor at Independence, was fined \$50 for practicing medicine without a license. He appealed and continued to offer his services as a practitioner which brought new complaints against him, filed by Dr. F. L. Cook, the registrar of vital statistics.

DR. FRANK N. WILSON of St. Louis has been appointed one of the American editors of *Heart*, the classical English quarterly devoted to the study of the circulation, edited by Dr. Thomas Lewis of London. Other collaborators of the journal in Missouri are Drs. George Dock and Joseph Erlanger.

DR. E. M. FESSENDEN, first house surgeon of the Frisco Hospital at Springfield, has been appointed surgeon in charge of the hospital to succeed Dr. Harry M. Moore, and Dr. R. W. Hogeboom has been appointed consulting surgeon for the hospital. Dr. Moore has been appointed surgeon in charge of the Frisco Hospital at St. Louis.

A SCHOOL for occupational therapy has been opened in the City Hospital at St. Louis under the direction of the Missouri Association for Occupational Therapy. A large room has been assigned for the workshop, fitted up with work benches and work tables some of which are specially designed for patients in wheel chairs. Miss Cora Ault is superintendent of occupational therapy for the hospital, and with two assistants teaches handicraft to the patients. Similar schools have been in operation for some time in the City Sanitarium and the Barnes Hospital.

DR. FREDERIC HAGLER, St. Louis, has accepted the position of chief surgeon to the Stevens-Duryea Corporation, manufacturers of automobiles at Chicopee Falls, Mass. Dr. Hagler was resident surgeon of the City Hospital at St. Louis for a number of years and after he began a private practice he was visiting surgeon at the City Hospital, associate surgeon of the Jewish Hospital, and instructor of surgery in the medical department of the St. Louis University. During the war he was in the service of the American Red Cross in Serbia fighting the typhus epidemic, and was decorated for meritorious service by the Serbian government.

DR. R. E. HOGAN of West Plains has completed and opened for the convenience of the people in the southwest section of the state, a splendidly equipped hospital which he has named the Christa Hogan Hospital, in memory of his mother. The hospital is a brick building containing twenty-one rooms with hardwood floors throughout, white enamel woodwork and equipped with every modern convenience likely to be required in the service such an institution



will render in the community. The institution has been utilized to its capacity since the opening and has kept five nurses busy attending to the patients. All reputable physicians are permitted to make use of the institution.

Two cats and two dogs shall be the limit of such household pets in St. Louis homes if an ordinance recently introduced in the board of aldermen passes, and chickens, geese, ducks, and other fowls are prohibited on any premises without a permit from the health department. These are measures calculated to protect the health of the people, according to Mr. Niederluecke, the author of the bills. An important bill introduced at the request of Hospital Commissioner Shutt provides for the appointment of a controller of tuberculosis who shall have the title of assistant hospital commissioner with full control of all tuberculous patients at the Koch Hospital and City Hospital. His salary will be \$3,600.

SEVERAL distinguished foreign medical men visited the principal medical schools in St. Louis while making a tour of the medical colleges of the United States. On May 2 and 3, under the auspices of the National Medical Board, with Dr. W. L. Bierring as manager of the commission, the following visited the medical schools of Washington University and St. Louis University: Sir Humphrey D. Rolleston, Professor of Medicine, St. George's Hospital Medical School, University of London; Col. H. J. Waring, Professor of Surgery, St. Bartholomew's Hospital Medical School, University of London; Dr. Norman Walker, University of Edinburgh; Dr. Gustave Roussy, Professor of Pathological Anatomy, University of Paris; Dr. E. E. Desmarest, Professor of Surgery, University of Paris. On May 5, 6 and 7, under the auspices of the Rockefeller Foundation, accompanied by Dr. R. M. Pearce, Director of Medical Education, Rockefeller Foundation; Dr. T. R. Elliot, Professor of Medicine, University College Hospital Medical School, University of London, and Dr. G. Elliot Smith, Professor of Anatomy, University College, London, visited the two schools.

ON May 15 all over the country celebrations were held in honor of the one hundredth anniversary of the birthday of Florence Nightingale, to whose vision the world owes a debt of gratitude for the adequately trained nurse. Florence Nightingale was of English parentage, of gentle people, and all her life was devoted to

bettering conditions in hospitals, particularly in giving better nursing care to those who were unable to demand it for themselves. Her great opportunity came during the Crimean War when she was finally given authority to organize a nursing corps for the care of men wounded on the field of battle and her work in the Crimea proved, certainly to the English people, that not only was much suffering alleviated but many lives saved by proper and efficient nursing care so that on her return to England she was given \$250,000 with which to start the Nightingale school of nursing. The first training school in this country, established approximately fifty years ago in Bellevue Hospital, was organized by a Nightingale sister brought over from England for that purpose and it is only fitting to note here that the woman who may justly be called the Florence Nightingale of the United State of America, Jane A. Delano, was a graduate of this school. It was due to Miss Delano's foresight, vision and patriotism, and great love of humanity, that 35,000 graduate nurses of this country were made available for use, not only with the military forces of our own country but also with our allies in Europe.

## MEMBERSHIP CHANGES, MAY

### NEW MEMBERS

Bothman, Louis, 333 University Club Bldg., St. Louis.  
Brown, William Sidney, 5535 Delmar Ave., St. Louis.  
Crapp, Leverett H., 620 Wall Bldg., St. Louis.  
Doggett, Sylvester, Morley.  
Fryer, C. P., Maitland.  
Geistweit, William H., Jr., Mo. Baptist Sanitarium, St. Louis.  
Helm, James H., Crocker.  
Hogan, John, 320 Metropolitan Bldg., St. Louis.  
Johnson, William E., Madison.  
Johnston, Benjamin L., Manes.  
Kimberlin, Joseph W., 900 Rialto Bldg., Kansas City.  
Peters, Augustus W., 7527 Michigan Ave., St. Louis.  
Young, John Homer, Young Bldg., Ozark.

### CHANGES OF ADDRESS

Alexander, Robert D., Missouri Pacific Hospital to University Club Bldg.  
Denslow, Frank M., 3015 Grand St., Kansas City, to 715 Bryant Bldg.  
Erdhaus, Henry R., 6334a Clayton Ave., St. Louis, to 1204 Tamm.

Ferguson, Joseph W., 401 Westover Bldg., Kansas City, to 315 E. Tenth.

Gerard, Jules H., City Hospital No. 1, St. Louis, to 3623 Cleveland Ave.

Hagler, Fred, St. Louis to Chicopee Falls, Mass.

Hamlin, Clyde W., Philadelphia to Palmyra.

Harmann, Martin F., 3441 N. Ninth St., St. Louis, to 2771 N. Grand Ave.

Harned, W. J., Ardmore to Maitland.

Jones, Vincent L., 414 Wall Bldg., St. Louis, to 3511 Washington Ave.

Lee, Elbert J., St. Louis to 181 W. Twenty-Fifth St., New York, N. Y.

Leusley, Marvin E., Madison, to 319½ Reid St., Moberly.

Moore, Harry M., Springfield to 407 Wall Bldg., St. Louis.

Patton, William G., 417 University Club Bldg., St. Louis, to Cape Girardeau.

Rayle, John E., Crocker, to 1363 Benton Ave., Springfield.

Rhea, Clarence W., 800 Third Natl. Bank Bldg., St. Louis, to 1501 Locust St.

Roach, James F., 807 Carleton Bldg., St. Louis, to 4341 Pine St.

Scharff, Eugene A., City Hospital No. 1, St. Louis, to 304 Humboldt Bldg.

Suggett, O. LeGrand, Black Mountain, N. C., to 128 Woodrow Ave., Asheville, N. C.

Taulbee, J. B., Joplin to Maysville, Ky.

Vinyard, Robert, Springfield to 407 Wall Bldg., St. Louis.

Walker, John M., 613 Lathrop Bldg., Kansas City, to 315 E. Tenth.

Wood, Eulalie, 5591 Bartmer Ave., St. Louis, to 617 Sunnyside, Webster Groves.

#### DECEASED

Hill, Herbert S., Springfield.

Smith, James D., Nelson.

Witmer, Cassius M., Santa Ana, Calif.

## OBITUARY

### HARRY A. UPSHAW, M.D.

Dr. H. A. Upshaw of St. Louis, a graduate of the Marion-Sims College of Medicine, now the Medical Department of St. Louis University, 1898, died at his home, April 3, 1920, of angina pectoris, aged 43 years. He practiced in St. Louis from the time of his graduation giving special attention to surgery. He was a member of the St. Louis Medical Society and the State Medical Association.

### JAMES D. SMITH, M.D.

Dr. J. D. Smith of Nelson, a graduate of the Washington University Medical School, 1887, died at his home, April 12, 1920, of paralysis, aged 60 years. He practiced in Nelson from the time of his graduation and was one of the first settlers after the town was established. He gained the respect and confidence of the entire community, and his death is a distinct loss to the people and to the profession. He was a member of Saline County Medical Society and the State Medical Association.

### CHRISTIAN P. GLAHN, M.D.

Dr. C. P. Glahn of Palmyra, a graduate of Washington University Medical School, 1901, died at his home, April 28, 1920, of lethargic encephalitis. Dr. Glahn served two years as intern in the City Hospital, St. Louis, going to Palmyra in 1904, where he soon became prominent in professional and civil life. His patients and friends feel a great loss in his untimely death, as he was beloved by all. He served on the local exemption board during the war and was a valuable member of the profession.

### HERBERT S. HILL, M.D.

Dr. H. S. Hill of Springfield, a graduate of Rush Medical College, 1869, and one of the founders of the Springfield Hospital, died in that hospital at Springfield, April 1, 1920, after an illness of five years, aged 77 years. Dr. Hill practiced in Dubuque, Iowa, and Owatonna, Minn., for several years before settling in Springfield in 1884. He was active in medical society affairs during his professional life and very much devoted to the interests of the Southwest Missouri Medical Association of which he was secretary for many years, and was a member of the U. S. Pension Board. He was a member of Greene County Medical Society and the State Medical Association.

### CASSIUS M. WITMER, M.D.

Dr. C. M. Witmer of Marble Hill, a graduate of the Jefferson Medical College, Philadelphia, 1881, died at Santa Ana, Calif., April 11, 1920, aged 62 years. After practicing in Milton, Ind., for a year he came to Missouri and located at Marble Hill where he practiced until a short time ago when failing health compelled him to seek the milder climate of Southern California. He was a very enthusiastic physician, a student and constant reader of new scientific methods of practice, and identified with every movement for the improvement of the profession and the people. His loss will be severely felt in the community where he practiced for so many years, and the profession in the southeast portion of



the state where his principal activities in medical society work were expended are deeply grieved with the passing of this good man. He was a member of the Cape Girardeau County Medical Society, the Southeast Missouri Medical Association, the State Medical Association, and a Fellow of the American Medical Association.

#### JOHN C. COOPER, M.D.

Dr. J. C. Cooper of Carrollton, for many years an active member of the Carroll County Medical Society, died at his home, May 2, 1920, after a few weeks of illness, during which time his frail body gradually weakened until life was extinct. In his death the oldest and best known physician in Carroll County passed to his reward. He was 87 years, 2 months, and 21 days old.

Dr. Cooper's life was a remarkable one. He was a man of action, and his career as a physician stretched over a period of sixty-four years, fifty-three of these years being spent in Carrollton. He was always very ethical and never made unkind remarks about his fellow physicians.

Dr. Cooper was born near Washington, Pa., Feb. 11, 1832. Following his early education in the common schools he graduated from the Medical Department of the University of Pennsylvania in 1856, and in the same year he located in Jefferson, Texas. On Sept. 27, 1860, he was married to Lucy M. Harris, who died at Carrollton, Aug. 30, 1882. During the entire period of the Civil War he served as a surgeon in the Confederate Army, and in 1867 he and his family moved to Carrollton, where he resided until his death.

He leaves five children, Dr. St. Cloud Cooper, Fort Smith, Ark.; Mrs. Hattie Kneisley, Carrollton; Mrs. Maude Hammond, Carrollton; Mrs. Texiana Cooper Warren, Honolulu, Hawaii; Dr. Harry B. Cooper, Honolulu, Hawaii.

His life was one of service and he will long live in the memory of his friends.

Thus passes the life of Dr. J. C. Cooper. May his soul rest in everlasting peace.

E. E. BRUNNER, M.D.

#### ALBERT F. KOETTER, M.D.

A brief announcement of the death of Dr. A. F. Koetter with appreciative remarks on his career was published in our April issue. The Council of the St. Louis Medical Society of which Dr. Koetter was a member instructed the committee on necrology to "prepare a special obituary of Dr. Koetter, including an account of his official activities in connection with organized medicine," the obituary to be read before the St. Louis Medical Society. The

special report of the necrology committee was read according to instructions and published in the *Bulletin* of the society together with a letter to Mrs. Koetter from Dr. John Butler of Hawk Point, Mo., and we give space to these evidences of the high esteem in which all who knew him held Dr. Koetter. The report of the committee follows:

Dr. Albert F. Koetter was born in St. Louis, July 14, 1871. He received his preliminary education at Smith Academy and the University of Missouri. He received his M.D. at the Missouri Medical College in 1892. He took postgraduate courses at Dresden, Leipsig, Vienna and Berlin in 1893, 1894 and 1895.

On his return to St. Louis he began the practice of his specialty and continued it until a few days before his death.

He was instructor in otology in the Washington University Medical School, and chief of the Otological Clinic in the same school. He was also otologist to the Deaconess Hospital, St. Louis.

Dr. Koetter became a member of the St. Louis Medical Society in 1898. He was elected a member of the Council of the St. Louis Medical Society in 1907, and a member of the committee appointed at this time to reorganize the society. He was a member of the membership committee in 1908; a member of the ways and means committee in 1910; a member of the council, 1910-1912; president of the society in 1914; member of the council, 1915-1917; editor of the *Bulletin*, 1918-1919; assistant secretary, 1918; secretary, 1919. He was elected a delegate to the American Medical Association by the House of Delegates of the Missouri State Medical Association in 1919 for a period of two years, attending the meeting of the American Medical Association as a delegate in 1919. He also represented the St. Louis Medical Society as a delegate to the Missouri State Medical Association for a number of years. He was secretary-treasurer of the Oto-Laryngological Section of the St. Louis Medical Society, 1909-1910.

Dr. Koetter died Feb. 28, 1920, having bravely fought a losing battle with malignant disease of the colon for four years, keeping cheerful and at work almost to the end of a life well spent in his chosen profession, and filled with the recognition of organized medicine as the above record shows.

GEORGE M. TUTTLE, M.D.

#### Dr. Butler's letter:

HAWK POINT, Mo., March 9, 1920.

MRS. A. F. KOETTER,

4643 Pershing Avenue, St. Louis.

*My Dear Mrs. Koetter:*—The sad intelligence, through the public press, of the loss of Dr. Koetter while not unexpected is appalling.

It is such a shock. We can scarcely believe our own eyes when we read; indeed it seems to be one of the inscrutable mysteries of creation, if not the most lamentable tragedy of human existence, that when a man reaches the fullest maturity of wisdom and attains the highest development of temper and judgment, then he must die. The death of your beloved husband, Dr. A. F. Koetter, adds affirmance to this melancholy contemplation.

It was my great privilege to have been his pupil, in the early days of our friendship, and as such his continued courtesy and kindness made our many years of association a more than happy one. This friendship, to me, is one of the brightest spots in my life, and I cannot in words express to you today how greatly I miss him.

The death so shocking to us, yet we cannot be sure that it was untimely, because he was so completely

equipped to live that he was perfectly prepared to die. The inexorable messenger who cannot be denied beckoned him apart just when the inducements to life were most alluring, just when the possibilities of service were most expansive, just when the approval of friends and colleagues were most unmistakable. But we cannot presume to challenge the dispensations of a providence which orders, with infinite wisdom, all the destinies of man.

For our sufficient consolation we must realize that the "Almighty has His own purposes," and that "the judgments of the Lord are true and righteous altogether."

The herald of death oft gives no day of grace, and when from the shadow came the summons it found Dr. Koetter yielding willing tribute to friendship and duty, found him to the last breath giving aid to others. Fate, silently beckoning, held aside the veil and he entered, to return no more, but today on the face of the cliffs of time we will chisel his name and beneath it subscribe the humble tribute: "He gave aid and comfort to his fellowmen."

"You may break, you may shatter,  
The vase if you will,  
But the scent of the roses,  
Will cling 'round it still."

Sincerely yours,  
(Signed) JOHN BUTLER, M.D.

## MISCELLANY

### HONORABLE DISCHARGED MEDICAL CORPS, U. S. ARMY AND NAVY

Calvert, L. C., Weston.  
Hirschberg, S. B., Kansas City.  
Moore, R. D., Clayton.

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1920

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH  
HAVE PAID THE STATE ASSESSMENT FOR  
ALL THEIR MEMBERS)

Webster County Medical Society, Dec. 1, 1919.  
Madison County Medical Society, Dec. 2, 1919.  
Livingston County Medical Society, Dec. 31, 1919.  
Schuyler County Medical Society, Jan. 9, 1920.  
Benton County Medical Society, Jan. 23, 1920.  
Camden County Medical Society, Jan. 28, 1920.  
Linn County Medical Society, Feb. 24, 1920.  
Ralls County Medical Society, March 8, 1920.  
Ste. Genevieve County Medical Society, March 17, 1920.  
Atchison County Medical Society, March 26, 1920.  
Chariton County Medical Society, April 6, 1920.  
Cass County Medical Society, April 7, 1920.

### ST. LOUIS MEDICAL SOCIETY

#### Meeting of the Council, March 10, 1920

The meeting was called to order at 9 p. m. by the chairman, Dr. Cyrus E. Burford.

The following applicants for active membership were elected: Homer T. Clay, Thomas E. Edwards, Jules H. Gerard, William W. Hoyt, William J. Langan, Jr., Anthony R. Reyes, Frank J. Smith, Homer Wheelon, Lloyd O. Helmes.

Dr. Tuttle, chairman of the necrology committee, was instructed to have a special obituary prepared for Dr. Koetter, including a detailed account of all his official activities as connected with organized medicine, the obituary to be read before the general society and a copy sent to Dr. Koetter's widow.

Dr. Hamel moved that the library committee be instructed to look into the feasibility of having the library of the St. Louis Medical Society taken over by the St. Louis Public Library temporarily, until such time as the financial condition of the St. Louis Medical Society would warrant the proper housing of the library. Seconded and carried.

On Dr. Falk's motion a committee was appointed to investigate the question of inserting advertisements in the *Bulletin*. Drs. Engelbach and Gayler were appointed on the committee.

Dr. Falk moved that all the Bartscher Fund income be used because of the acute financial shortage. Seconded and carried.

Dr. Engelbach moved that a committee be appointed to solicit funds from members who were not in service to overcome the deficit of the society. Seconded and carried. Drs. Reder, Falk and Graves were appointed on the committee.

A letter from Dr. H. E. Kleinschmidt resigning from active membership was read. Dr. Kleinschmidt's resignation was accepted, effective Dec. 31, 1919.

A letter from the secretary of the Medical Society of the County of New York relative to transferring membership of Dr. John C. Murphy was read.

Dr. Hamel moved that the letter be referred to the Secretary of the Missouri State Medical Association requesting that the matter be taken up with the American Medical Association. Seconded and carried.

A letter from the Suffolk District (Massachusetts) Medical Society relative to transfer of membership of Dr. O. J. Raeder was read.

This letter was also referred to the Secretary of the State Association.

An application for active membership by transfer from the Greene County (Illinois) Medical Society from Dr. J. J. Ehreshmann was read the first time and referred to the membership committee.

Dr. Frederick C. Simon was appointed second vice president in the place of Dr. Gayler.

An application for active membership by transfer from Dr. L. R. Sante from the Southern District Medical Society of North Dakota was read for the second time and he was elected.

W. C. GAYLER, M.D., Secretary pro tem.

#### Meeting of April 13

The meeting was called to order at 8:35 p. m. by the president, Dr. C. E. Burford.

The scientific program consisted of the following:

#### CARDIAC SYMPOSIUM

"Valvular Heart Disease," by Dr. G. Canby Robinson.

"Diagnosis of Myocarditis," by Dr. Frank N. Wilson.

"Thrombosis of the Coronary Arteries with Tachycardia," by Dr. George R. Herrmann.

"The Heart in Diphtheria," by Dr. Hugh McCulloch.

Discussion by Dr. J. Curtis Lyter, Professor Green, of the University of Missouri, Columbia; Drs. John L. Tierney, William H. Thaler, J. C. Kopelowitz, M. T. Burrows, A. E. Strauss; Drs. Robinson, Wilson, Hermann and McCulloch in closing.

Attendance 118.

ARTHUR GUNDLACH, M.D., Secretary.

#### Meeting of April 20 of the General Society

The meeting was called to order at 8:35 p. m. by the president, Dr. C. E. Burford. A letter from the St. Louis Tuberculosis Society inviting the members of the St. Louis Medical Society to attend the sessions of the National Tuberculosis Association was read.



Dr. M. B. Titterington introduced Dr. Kennon Dunham of Cincinnati, who read a paper entitled "Differential Diagnosis of Influenza and Pneumonia."

Discussion by Drs. J. J. Singer and Llewellyn Sale.

Dr. L. C. Boisliniere introduced Dr. A. G. Shortle of Albuquerque, N. M., who read a paper on "Solorization in Treatment of Tuberculosis."

Discussion by Drs. Boisliniere, C. H. Neilson, Seelig Simon, George Stone, S. T. Lipsitz; Dr. Shortle closing.

Dr. Singer introduced Dr. J. S. Pritchard of Battle Creek, Mich., who spoke on "Nontuberculous Conditions Found in the Chest," illustrated with lantern slides.

Discussion by Drs. J. C. Lyter, S. T. Lipsitz, L. C. Boisliniere; Dr. Pritchard closing.

Attendance 163.

H. UNTERBERG, M.D., Secretary pro tem.

### Meeting of April 27

Dr. Frank L. Morse presented an interesting case of tuberculosis of the spine involving first and second lumbar five years after operation.

Discussion by Drs. C. A. Stone and Henrietta S. Borck.

Dr. Burford quoted from the retiring address of ex-President Dr. William Engelbach, relative to discontinuing the meetings of the society in May instead of June on account of the lack of attendance at the June meetings.

Discussion by Drs. Henrietta S. Borck, J. Curtis Lyter and C. A. Stone.

Attendance 47.

ARTHUR GUNDLACH, M.D., Secretary.

## PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

### Sixty-Sixth Meeting, Monday, March 8, 1920

A CASE OF PATENT DUCTUS ARTERIOSUS (BOTALLI) ASSOCIATED WITH COMPLETE HEART-BLOCK.—By DR. ARTHUR E. STRAUSS, M.D.

(Presented at the sixty-fifth meeting of the society.)

This case is presented because of the rare association of patent ductus arteriosus (Botalli) with complete heart-block.

The patient, a man of 52 years, first came under my observation one month ago at the Washington University Dispensary.

Family history.—Unimportant.

Previous history.—Absolutely negative. He has had no infectious disease. He denies all venereal diseases. He has never been ill or incapacitated before present condition.

Present illness.—For about eighteen months patient has been troubled with attacks of "gas" on the stomach, unassociated with any other gastro-intestinal symptoms except constipation. For the past four or five months he has had dyspnoea on slight exertion, which recently has been much worse. He has occasional vertigo on sudden change of position, but has never fainted. He has had frequent nocturnal urination for several years.

Physical examination.—Shows a large-framed man of 52. Except for the cardiovascular system, the examination is essentially negative. The heart is enlarged to percussion. The supracardiac dulness is increased, being 8.5 cm. wide in the second interspace. There is a systolic pulsation in the second interspace, 6 cm. to the left of the midsternal line. At this point there is also a well-marked systolic thrill, which is transmitted outward toward the left shoulder, also felt in the vessels of the neck and over the entire precordium, but less distinctly than over the pulsating area. Over the whole precordium can be heard a loud blowing systolic murmur, but this murmur is loudest and

of a more roughened character at the area of pulsation mentioned above. This murmur has the same transmission as the thrill, outward toward the left shoulder.

The two normal heart sounds can be heard as usual, of good quality, with a regular but slow rhythm, 34 per minute. In addition to these sounds there is heard an extra short sharp sound which travels through the various phases of diastole, with no apparent relationship to the ventricular sounds. These sounds, which are undoubtedly auricular in origin, can be heard over the entire precordium. There is slight cyanosis. The blood pressure is systolic, 152; diastolic, 72 mm. of mercury. The urine shows a slight trace of albumen with hyaline casts. The Wassermann reaction on the blood taken here was negative.

The electrocardiogram shows a typical complete heart-block, with an auricular rate of 60 and a ventricular rate of 34 per minute.

The roentgen-ray plate shows cardiac enlargement to the left and right, with an increased supracardiac shadow, due particularly to a distinct but gradual bulge to the left, most marked in the region of the second interspace. Fluoroscopy confirms the findings noted in the plate and gives us much additional information. The ventricles can be seen contracting very forcibly and slowly. Following the ventricular contractions regularly (as the ventricles follow the auricles in the normal heart) the curved bulging upper border of the "heart shadow" shows a marked dilatation, each ventricular contraction being followed by this marked dilating pulsation above. This bulging shadow does not show any auricular contractions, and observation in various diameters proves it to be the pulmonary artery, and not a dilated left auricle. The right border of the heart shadow, the right auricle, shows distinct small but definite contractions, about 60 to the minute. These contractions are independent of the ventricles, which are contracting about 35 to the minute.

The physical signs elicited by ordinary examination, the localization, character, and transmission of the pulsation, murmur, and thrill, together with the roentgen-ray findings, bear out the diagnosis of patent ductus arteriosus (Botalli).

The relationship between this congenital lesion and the heart-block is uncertain. The cardiac symptoms date back only four or five months, and we have one positive observation made eighteen months ago in another department, when a pulse rate of 72 was recorded, and superficial cardiac examination revealed a "systolic murmur in the pulmonary area." With these facts as a basis we believe the heart-block to be of recent origin, and probably having only an accidental association with the patent ductus arteriosus.

### DISCUSSION

DR. ROBINSON: I was very much interested in this case from a point of view that Dr. Strauss has not particularly emphasized. There are very loud sounds produced when the auricles contract independently of the ventricles. I have never heard auricles make such definite sounds when contracting. This fact suggested to me that there might be an opening between the auricles so that there was a passage of blood from one to the other when they contracted. I thought this might be responsible for the loud sounds, especially as a congenital heart lesion is evidently present. Dr. Strauss' arguments, however, are very much against the presence of that lesion and very much in favor of an open ductus arteriosus. It was very interesting to watch this heart beat with the fluoroscope. When the ventricles contract, the auricles could be seen to dilate and we could see the auricles contract independently, as Dr. Strauss has described.

DR. DOCK: Another interesting thing about the case is that the patient has reached middle life in fairly good anatomical condition. It illustrates what

sometimes happens in congenital lesions and it is often a matter of surprise to those who have not seen people reach that age with such lesions. I think one must agree with Dr. Strauss about the character of the lesion and it is likely that he is right about it. That he has not some other lesion that Dr. Strauss considered, I do not think can be decided now. Though some of these patients reach middle life and sometimes beyond that, they have certain risks. The first risk is when they have the diseases of childhood, especially bronchitis and bronchopneumonia. The first discovery is often made in an acute respiratory disease. Then they get murmurs, the nature of which can not be worked out easily; the next risk is when they get into the stage of puberty and get physical and mental strains and may develop cardiac insufficiency. The fact that the patient served in the army is proof that he had a sufficient heart at that time. He could have been taken into military service even with a murmur. Even if he had a more serious defect, once he got in and was found sufficient from a cardiac standpoint, he might have done his work during that time, and I dare say that he had some strenuous work.

DR. WILSON: I have gone over this patient with Dr. Strauss on several occasions and I may say that we both arrived at the same diagnosis independently. Dr. Strauss has pointed out the reasons for the diagnosis made. The radiogram is typical; it is exactly like the illustrations of open ductus given in the textbooks on the roentgen rays in cardiac diagnosis. Could aneurysm of the aorta give a similar picture? Aneurysm does not usually produce pulsation on the left border of the heart silhouette unless it is farther back in the chest; the pulsating vessel in this case was near the anterior chest wall as shown by fluoroscopy in the oblique position. Furthermore, the pulsation was very marked; a characteristic of pulsation of the pulmonary artery. The left border of the heart in the area of pulsation moved at least 1.5 cm. with each systole; the complete heart block of course tended to exaggerate the excursion. I think there is little doubt that open ductus arteriosus is the correct diagnosis.

# 1. ENTWINING OF THE UMBILICAL CORD IN SINGLE AMNION TWIN PREGNANCY.

—By DR. S. F. ABRAMS.

The placenta of single ovum twins is usually made up of a single chorion, a double amnion, and two umbilical cords. Occasionally cases are seen in which there is a single amnion. About twenty-three cases of this have been reported in literature.

This specimen was expelled from a uterus of apparently twenty-four weeks' gestation. The uterus had not increased in size in the last two months and no fetal movements had been felt. The size of the uterus was accounted for by hydramnios.

The specimen consisted of a single placenta to which were attached two cords. The placenta measured 10.5 x 11 cm. and was about 1.25 cm. thick. The two cords varied greatly in size. The larger, attached to a well developed male fetus 17.5 cm. in length was 25.5 cm. long; 0.5 cm. in diameter and attached centrally in the placenta. The smaller cord, about one-half the diameter of the larger at its insertion, was 14 cm. long and gradually became thinner as it approached its attachment to the smaller fetus. About 0.5 cm. from its placental attachment, the smaller cord divided into two branches, the smaller branch inserted into the placenta close to the large cord, and the larger branch anastomosing directly with the larger cord. Eight cm. from the placental extremity, the smaller cord was wound about the other for two complete turns and above this was tied into a true knot.

By pulling the smaller cord near its attachment, a definite fold presented itself, which shut off a small

cavity from a larger amniotic cavity. This may be accounted for if one believes the theory that originally there were two amnions and the fetus destroyed one by active movements.

The smaller fetus was a monster answering the description of acardiacus acephalus. It presented two lower extremities and male genitalia, but no head or upper extremities. It was 10.5 cm. in length.

# 2. A STUDY OF THE SO-CALLED RESPIRATORY STIMULANTS UNDER CONDITIONS OF INCREASED INTRACRANIAL PRESSURE.

By A. S. LOVENHART, H. G. MARTIN, AND J. Y. MALONE.

(From the Pharmacological Laboratories of the University of Wisconsin.)

The purpose of the experiments was to find a means of stimulating the respiration when it is either relatively or completely embarrassed by increased intracranial pressure, until the cause of the pressure could be corrected by the recognized method of decompression.

Many drugs have been recognized as respiratory stimulants but, for the most part, the difference in their efficiency under various conditions has not been differentiated. Thus we have tested out a large number of so-called respiratory stimulants to determine their relative efficiency under certain clinical conditions; namely, various degrees of increased intracranial pressure. Their effects were studied when the intracranial pressure and blood pressure were parallel and when the intracranial pressure was constant. The former was done by devising an apparatus which would automatically increase the intracranial pressure as the blood pressure increased and vice versa, while the latter was done by raising the intracranial pressure to various levels irrespective of the blood pressure.

## CONCLUSIONS

1. Ammonia inhalation gives a slight transient stimulation but has the danger of producing edema of the glottis:

2. Caffein, papaverin, narcotin and ether have no stimulating action.

3. Lactic acid has an unreliable stimulating action with a depressing after-effect.

4. Atropin sulphate has a slight stimulating action followed by rapidly falling blood pressure and a markedly decreased pulse pressure and therefore it is probably more harmful than useful.

5. Strychnin sulphate has a direct stimulating action on respiration but the specificity is somewhat less than that of sodium cyanid. Stimulation lasts from three to forty minutes; 0.125 to 0.25 mg. intravenously being effective in dogs while 1 mg. is effective in man. It has a disadvantage of having accumulative action on repeated doses.

6. Sodium cyanid is a rapid, powerful stimulant to the respiratory center; the respiratory volume being increased to normal or more for periods of from one to thirty minutes, when the cyanid is injected rapidly, while if injected slowly at the proper rate, the respiration may be stimulated for longer periods of time; N/100 for dogs and N/50 for man is the proper strength of solution. It is changed rapidly in the body so that repeated doses or large doses over long periods of time have no accumulative action and also if any deleterious results do occur, the action can be stopped immediately. The leeway between the toxic and the therapeutic dose is practically the same as that for strychnin; namely, about 15 to 1, and if injected at the proper rate, many times the single toxic dose may be injected in a period of less than an hour without any bad effects. Thus, cyanid may be useful clinically to stimulate the respiration during a period of decompression and thus the vicious circle be broken. It should be tried in other cases of respiratory collapse.



## DISCUSSION

DR. SACHS: This work that has been reported is of a great deal of interest as it offers the opportunity for stimulating respiratory centers during acute types of increased intracranial pressure.

We have had one or two opportunities in fracture cases of trying it, but we have never yet had the opportunity of keeping up the respiration long enough to tide the patient over the acute stage, until we could decompress them. It, however, was perfectly evident that cyanid did stimulate the respiration.

The one question that struck me as important is this: We have an idea, and it is generally said, that after the intracranial pressure reaches a certain point, the medullary center is said to be exhausted and that, of course, is the time when the patient dies. Now, if an animal has reached the stage where respiration has stopped and has been started again, did the animal continue to live afterwards? Is this merely a temporary stimulant or can the respiratory center stop functioning and then start up and continue? That point was not brought out, and is, of course, essential. Other drugs may give you temporary stimulation, but have no lasting effect.

DR. MARSHALL: There are just one or two points on which I should like to comment. They have found no effects from caffeine on the respiratory center. It is a drug for which there is good experimental evidence that it does stimulate the respiration. A great deal of work has been carried out showing the stimulation of the respiratory center by caffeine after it has been depressed with narcotics, such as morphin, heroin, etc. There would appear to be a difference in the action of caffeine depending on how the center has been previously depressed.

Mr. Malone mentioned that it would be necessary to consider not only the rate of respiration but the total volume of air breathed. I might mention that some of the recent workers on respiration think it is necessary to take in consideration also the true alveolar ventilation. This can be calculated by determining not alone the total volume of air but also the alveolar carbon dioxid and the carbon dioxid content of the expired air.

MR. MALONE, closing: We did not specifically study whether the animal lived following cyanid injections, so that the only light that I can shed from our experiments is that we did, for instance, give cyanid during the experiments, decompressed and then leave the animal in the hands of the technicians for two or three hours when the blood pressure was found to be up and regular respiration going on with a normal volume. Also all of our human cases lived.

In regard to caffeine, I am glad Dr. Marshall raised this point for it emphasizes the importance of studying the action of various members of a group of drugs under the clinical conditions they are proposed to be used in.

In regard to the alveolar ventilation, I do not know, but I should say that in these experiments it was good, because the animals did live and the medullary centers continued to function normally after decompression. I remember one case in which we stimulated the animal for over three hours and normal medullary function followed decompression.

### 3. A STUDY OF THE GASTRIC GLANDS OF THE MISSISSIPPI ALLIGATOR. — By DR. FOREST H. STALEY.

Although a great deal of work has been done on the gastric glands of reptiles, the question is still unanswered as to the kinds of cells which enter into their structure. It was believed that some light might be thrown on the subject by employing the special reagents which have been used to so much advantage in recent years in the study of the gastric glands of mammals.

Bensley's special fixing fluid was found to be the best all round fixative as it preserves all the granules in the cells of the gastric glands. Bensley's stains have now come to be recognized as specific for differentiating the "chief" and "parietal" cells in mammals. His copper chrome hematoxylin stain is specific for "parietal" cells, his neutral gentian is specific for "chief" cells and his tricolor stain brings out the characteristics of both the "chief" and "parietal" cells. The modification by the same investigator of Mayer's mucematin stain is specific for mucin. These stains, including many others, were tried out both on mammalian gastric wall and on that of the alligator. Likewise Bensley's method of vital staining with neutral red was also carried out in detail on the alligator material. The gastric juice of twenty alligators was studied to determine the presence of free mineral acid.

The results of the experiments are briefly as follows:

1. The surface epithelial cells and those lining the gland pits in the fundus, cardiac and pyloric regions of the stomach of the alligator are not true mucous cells, but present some evidence tending to show that possibly they assume a rôle comparable to the "chief" cells of the mammalian stomach.

2. The cells composing the necks and bodies of the glands in the fundus portion of the stomach, according to histochemical reactions, are "parietal" cells. There are a few "parietal" cells also in the necks and bodies of the glands in the cardiac and pyloric portions of the stomach. In the fasting stomach only an occasional granule occurs in the "parietal" cells.

3. The results of the experiment with the vital dye, neutral red, show that true "parietal" cells are present as the cells of the necks and bodies of the glands in the fundus portion of the alligator's stomach, and are probably the seat of the formation of the acid.

4. The gastric juice of the alligator is acid to litmus paper and contains a free mineral acid.

## DISCUSSION

DR. TERRY: It is a source of much satisfaction that Dr. Staley has completed this work which has been carried out in the face of a number of obstacles. The point, of course, to be emphasized is that there has been introduced for the first time in this study of gastric glands in a reptile methods involving the use of specific stains. Dr. Staley has been able thereby to make observations that could not have been made by the older methods. His study has added some facts of interest to the knowledge of the gastric glands of the alligator, and it is hoped may lead others to undertake further investigation of the subject.

### 4. BRANCH-BUNDLE BLOCK AND ARBORIZATION BLOCK.—By DR. FRANK N. WILSON AND DR. GEORGE HERRMANN.

It has been shown that if one of the two chief branches of the His-bundle be cut in animals, characteristic changes in the form of the physiologic electrocardiogram result. Similar abnormalities of the form of the electrocardiogram occur in man and in two such instances lesions of the branches of the His-bundle have been found at necropsy. There is little experimental evidence that lesions of the subdivisions of the branches of the His-bundle or their terminal arborizations produce more than minor changes in the form of the electrocardiogram. From a review of the literature it seems to us that recent criticisms of the criteria ordinarily used in the diagnosis of branch-bundle block are not well-founded. We believe, also, that, until it has been definitely shown that experimental lesions of the subdivisions of the branches of the His-bundle produce definite and characteristic changes in the physiologic electrocardiogram, the diagnosis of arborization block rests on an insecure foundation.

We have recently performed a series of experiments which substantiate the views expressed above. The character of these experiments may be illustrated best by a short account of one of them.

A dog was anesthetized with morphin and ether. The chest was opened by splitting the sternum, respiration being maintained artificially. The pericardium was opened and control electrocardiograms were taken. An attempt was then made to cut the left branch of the His-bundle. Characteristic left branch block electrocardiograms resulted and were recorded. After a few moments the physiologic electrocardiogram returned. Right branch block was then produced by pressure on the right branch of the His-bundle. Characteristic electrocardiograms resulted and persisted for about one and one-half hours at the end of which time the physiologic electrocardiogram again returned. During the time that right branch block was present the right ventricle was stimulated by single induction shocks at irregular intervals, the effects being recorded in lead II. When the stimulus fell between the end of T and the following P an extrasystolic ventricular complex resulted which closely resembled the ventricular complexes recorded earlier in the experiment while left branch block was present. When the stimulus fell during the P-R interval ventricular complexes transitional in form between those of right branch block and those of left branch block were produced. When the stimulus fell at exactly the proper instant the normal ventricular complex was reproduced; when it fell a little earlier or later the complexes were transitional in form. These transitional complexes showed the following characteristics: (1) They were for the most part diphasic; (2) the QRS interval was intermediate in length between that of the normal complexes and that of the branch block complexes; (3) T was of a type transitional between that of the normal complexes and that of the branch block complexes. The direction of T was mainly dependent on which of the two ventricles was first activated; if the QRS group began with right ventricular effects T was negative; if it began with left ventricular effects T was positive. It was also found that when right branch block was present the refractory phase persisted longer at the right conus than at the left apex, indicating that the ventricle which first becomes active first loses its activity.

From a series of such experiments and a comparison of the lesions produced and the type of electrocardiograms obtained we conclude: (1) that lesions which do not completely interrupt but only delay the passage of the impulse through one of the chief branches of the His-bundle produce electrocardiograms transitional in form between the physiologic electrocardiogram and the type of electrocardiogram associated with branch bundle block, and (2) that the direction of T in such instances is mainly determined by the ventricle which is first activated and which is consequently first to pass out of the active state. We have in many instances cut minor subdivisions of the branches of the His-bundle and in a few instances their major subdivisions, and we have never seen conspicuous changes in the form of the ventricular complex result from such lesions; such changes as occurred did not resemble in any way the curves of so-called arborization block. We can not deny that such curves may result from widespread lesions such as have been described in man but as previously stated we do not believe that the diagnosis of arborization block in the present state of our knowledge is justifiable.

#### DISCUSSION

DR. ROBINSON: After discussing what we should take as our main problem in the heart station of the medical department this year, we decided to undertake a study of the electrocardiogram with the object of interpreting the changes that occur in the ventricular

portion. The work Drs. Wilson and Herrmann have reported is the first fruits of labor along this line. It is of great clinical importance to learn to interpret correctly changes in the electrocardiogram, as by this means we can get an understanding of the physiologic abnormalities that result from lesions of the myocardium. As you know, clinicians are eager to possess better means of studying disease of the heart muscle. Another reason for undertaking this study is the widespread belief in what we consider to be a false notion. Oppenheimer and Rothschild published a paper on so-called "Arborization Block," and I did not like this paper for two reasons. One was that I did not think their conclusions were justified by their findings, and also because they ignored a paper which I published previously which presented arguments against their theory. The idea of arborization block is attractive, and many persons seem to have accepted it as a proven entity. I believe Dr. Wilson's work will show that it is not.

DR. ERLANGER: I was very much interested in this paper. But Dr. Wilson has presented his subject so clearly that it would really be futile to discuss the points he has made.

One matter he did not mention specifically that ought to be referred to is the change that has come over physiologists in regard to their views on conduction rate in the heart. It was Gaskell who suggested that the delay occurring between the contraction of the auricle and the contraction of the ventricle was due to the narrowness and the peculiar histologic characteristics of the connection between those two parts. We now know that impulses travel more rapidly through these narrow connections than through the heart muscle proper.

I did some experiments in 1911 in which I was able to show, under rather difficult conditions, to be sure, that the impulse is conducted faster in a narrow strand of the conducting system than in a thick mass of heart tissue. The false tendons of the right ventricle of the calf's heart usually contain no heart muscle whatever, only Purkinje's tissue. If such a strand is stimulated electrically in the perfused, beating heart and records of the time of the stimulation and of the resulting contraction of the heart are made it is found that the latent period is very much shorter when the stimulus is led into the heart through the narrow bundle of the conducting system than when it is applied directly to the heart muscle itself. Almost everything that Dr. Wilson has touched on this evening finds its explanation in this fact which has been confirmed in other ways and now is universally accepted.

#### BUCHANAN COUNTY MEDICAL SOCIETY

The regular scientific session of the Buchanan County Medical Society was held at the Commerce Club Rooms, St. Joseph, March 17, the president, Dr. Dandurant, calling the meeting to order.

Dr. A. L. Gray moved that a committee be appointed to draft resolutions in regard to the death of Dr. Barton Pitts. Seconded by Dr. Renaud and carried.

Dr. Pentz introduced the following resolution:

*Resolved*, That our delegates to the Missouri State Medical Association be instructed to introduce and push forward a resolution to instruct our state delegates to work in the American Medical Association for a determined effort to have medical fees for government work kept on a fee basis at adequate and regular fees and where a station is placed on a salary basis that the salary be approximately the average for that station if computed on a fee basis; and be it further

*Resolved*, That we wish our parent societies to resist with all their power any attempt to cheapen either the remuneration or the prestige of the medical profession when doing government work in any capacity or at any time.



Dr. Kenney moved that the resolution be adopted as read; seconded by Dr. A. L. Gray. Dr. Potter moved to amend by adding, "all railway, corporation, life insurance and contract practice." Seconded by Dr. Pentz and carried. The resolution then was adopted as amended.

Dr. McGlothlan presented the invitation of Dr. Porter E. Williams, asking the society to meet at State Hospital No. 2, March 31, at 7:30 p.m. The invitation was accepted.

Dr. A. L. Gray read a paper on "Accidental and Criminal Abortions; Diagnosis and Treatment." It was discussed by Drs. Leonard, Spencer, Willman, Holley, Elam, Stevenson, Potter, McGlothlan, DeLamater, and Ladd.

Dr. Renaud read his paper, "A Few Practical Points in Tonsillectomy." Discussed by Drs. Ferguson, Willman, Kenney, Leonard, Holley, Elam, Stevenson, Potter, and DeLamater.

Attendance 31.

#### Meeting of March 26

The society made record of a most interesting clinic held at Noyes Hospital. The attendance at this meeting was thirty-two. The subjects presented by the welfare board staff were as follows: Surgical, by Dr. Doyle: 1 tubercular peritonitis, 1 inguinal peritonitis, 2 hysterectomies, 1 prickle cell epithelioma.

Pediatrics, by Dr. Ballard: 2 congenital syphilis.

Genito-urinary, by Dr. Bansbach: 1 enlarged prostate.

Medical, by Dr. Carle: 1 chronic asthma, 1 nonseptic pleural effusion. Those present entered freely into the discussion.

Dr. Dave Liberman, a visitor from Chicago, reported his experiences with radium while connected with the service of the Chicago Physicians Radium Association.

#### Meeting of March 31

The meeting of the society at State Hospital No. 2, as guests of Dr. Porter E. Williams, registered a representative attendance. Following the dinner, Dr. Herman E. Pearse of Kansas City discussed the movement for hospital standardization and urged that steps be taken immediately toward promoting this movement in St. Joseph. A series of clinics were presented and the meeting adjourned at 10 p. m.

#### Meeting of April 14

The regular business session of the society was held at the Commerce Club Rooms, the president, Dr. Dandurant, in the chair.

The committee on resolutions, consisting of Drs. C. H. Wallace, J. M. Dunsmore and J. M. Bell, presented the following relative to the death of Dr. Barton Pitts:

WHEREAS, It has pleased Almighty God to remove from our midst Dr. Barton Pitts of this society, a fellow practitioner, well beloved by all its members; be it

*Resolved*, That the Buchanan County Medical Society has sustained a profound loss of one of its honored members and fellows whose place it will be impossible to fill; that the medical profession of this city realizes its loss of a most progressive and prominent ophthalmologist and friend, whose affable smile and congenial fellowship were keenly appreciated, that St. Joseph observes with marked regret the passing of one of its prominent citizens whose uplifting power will be distinctly missed; be it further

*Resolved*, That the Fellows of this society extend their sympathy in our mutual sorrow to the wife and family of our departed friend and that a copy of these resolutions be sent to Mrs. Barton Pitts, conveying to her our sense of profound sorrow in the loss we have mutually sustained.

On motion the resolution was adopted unanimously.

Dr. McGill moved that a committee be appointed to confer with the boards of directors of the hospitals in St. Joseph to aid in the standardization of these institutions; seconded by Dr. Ladd and carried.

Dr. Byrne moved that the members of this society call attention to solicitors, that the members must refrain from advertising in programs, class papers, state or county histories and similar publications; seconded by Dr. Wisser and carried.

Dr. Elam moved that the society go on record indorsing the service of Dr. L. J. Dandurant on the board of health and recommend to the mayor-elect that Dr. Dandurant be continued a member of the board; seconded by Dr. A. L. Gray and carried.

Dr. Potter moved that the secretary write a personal letter to all suspended members of the society; seconded by Dr. Ladd and carried.

Dr. McGill moved that the society indorse the clean up week activities inaugurated by the Commerce Club and lend all possible assistance to further the movement, seconded by Dr. Ladd and carried.

Dr. Byrne reported a patient that had come under his care showing evidence of an attempted abortion. The patient later miscarried. Dr. A. L. Gray moved that a committee be appointed to investigate the case reported by Dr. Byrne; seconded by Dr. Elam and carried. The president appointed as this committee Drs. A. L. Gray, W. T. Elam and F. H. Ladd.

Dr. Stevenson reported a case of morphinism that had applied at the welfare board clinic for treatment.

Dr. Ladd reported a case of meningitis of special interest.

Dr. Potter presented the subject of lethargic encephalitis. The discussion was by Drs. McGlothlan, Proud and A. L. Gray.

Attendance 29.

OLIVER C. GEBHART, Secretary.

#### DAVISS COUNTY MEDICAL SOCIETY

The regular meeting of Daviess County Medical Society was held at Gallatin, January 13. Election of officers resulted as follows: President, J. D. Dunham, Pattonsburg; first vice president, T. E. Cooper, Gallatin; second vice president, L. R. Doolin, Gallatin; secretary and treasurer, M. A. Smith, Gallatin; reporter, N. M. Wetzel, Jameson.

The following committees were appointed by the president: Membership, Charles E. Griffith, T. E. Cooper, P. L. Gardner. Health and Legislation, N. M. Wetzel, Charles E. Griffith, D. L. Porterfield.

N. M. WETZEL, M.D., Reporter.

#### MARION COUNTY MEDICAL SOCIETY

Marion County Medical Society met at Hannibal at 8 p. m., May 7, in Dr. Hornback's office. Besides Dr. Hardesty in the chair there were present, Drs. Hornback, Hays, Farrell, Baskett, Bourn, Chowning, Waldo, Howell, Ross, and visiting, Drs. Russell, of the state board of health, and Tutt and Guss.

At the previous meeting five weeks before Dr. Bourn had reported a case operated for hemorrhage into the abdomen from vessels in the neighborhood of the appendix. After the man had been at home well he returned to the hospital with acute pancreatitis and a retroperitoneal hemorrhage. Two days after his return to the hospital he died.

Dr. Hardesty reported a lady 68 years old with erysipelas who did not clear up mentally when the erysipelas disappeared. Her blood pressure was exceedingly low and she had sugar and albumin in her urine, incontinence of feces and urine. She had bruised her sacrum in a fall and he removed almost half a gallon of pus which gave a pure culture of streptococcus. On diabetic diet she regained power

to help herself and control her bowels and bladder and her mind cleared up when her blood pressure rose.

Dr. Farrell reported a case of pyloric stenosis that showed no symptoms for three weeks after birth; complete and uninterrupted recovery followed operation.

Dr. Hays reported a patient with tuberculosis following influenza who was very hard to feed on account of a previous operation for removal of appendix.

Dr. Russell talked to us about the establishment of a free venereal clinic in Hannibal and the society indorsed his program unanimously. A board of four was chosen to select the man to run the clinic and to fit up the office for it. Dr. Chowning will represent the medical society on that board. Dr. Russell is an ex-officio member and the others will come, one from the Red Cross and one from the city council.

MARY S. ROSS, M.D., Secretary.

### JACKSON COUNTY MEDICAL SOCIETY

The seventeenth regular meeting of the year was held May 11, 1920, and in the absence of the president was called to order at 8:15 p. m. by F. T. VanEman.

The following scientific program was given:

"Pathological Anatomy," by C. S. Capell.  
"Diagnosis, Symptomatology, Preoperative Investigation and Treatment," by F. M. Denslow.

"Operative Technic," by E. G. Mark.

"Postoperative Care and Results," by R. L. Hoffman.

Discussion by Drs. McCallum, Ockerblad, Knappenberger, Rosenwald and Fischer.

Attendance 60.

#### Council Meeting

The regular meeting of the Council was held May 11, 1920, at 7 p. m. Councilors present: Drs. Frick, Trask, Lowe, Wilson, Skinner, Stewart and Woolley. Councilors absent: Drs. Binnie and Schaffler.

The report of the Library Committee regarding the plans for the amalgamation of the Library Club with the society was read and accepted and ordered published in the *Bulletin* for the consideration of the members. The report to come before the society at a future date.

A communication from the Chamber of Commerce regarding the Reunion of Evacuation Hospital Unit No. 7 in this city May 22 and 23, was read and referred to the Entertainment Committee.

A communication from the Chamber of Commerce in regard to an invitation to the American Medical Association to hold their 1922 meeting in Kansas City was read and the president was requested to appoint a committee to confer with the Chamber of Commerce regarding same and to report at a called meeting of the Council. The president appointed R. T. Sloan, W. J. Frick, W. L. McBride.

The following were elected to active membership: Austin Bryon Jones, 2342 Jackson Avenue; George W. Burch, 1722 East Eighth Street; Newton A. Seehorn, 215 New Center Building, on transfer from Reno County (Kansas) Medical Society; John A. Graham, 329 Argyle Building; James C. Minor, 511 Commerce Building; Frank R. Vieregg, 203 Askew Avenue; Evan S. Connell, 608 Commerce Building.

PAUL V. WOOLLEY, M.D., Secretary.

### WRIGHT-DOUGLAS COUNTY MEDICAL SOCIETY

The Wright-Douglas County Medical Society held its regular meeting in the parlor of the Archer Hotel at Hartsville, Tuesday afternoon, April 27, with the following members and visitors present: Drs. J. A. Fuson and R. M. Rogers, Mansfield; R. A. Ryan, Norwood; R. M. Norman, Ava; B. E. Latimer, Hart-

ville; A. C. Ames, Mountain Grove; B. L. Johnston, Maries, and George Rasch, New York.

The meeting was opened by the president, Dr. J. A. Fuson, and the minutes of the previous meeting were read and approved. The meeting was then turned over to Dr. Rasch, who presented the subject of "Immunology in Its Relation to Vaccine and Serum Therapy." In a very able and instructive manner, Dr. Rasch discussed the subject for fully two hours, during which time he held the undivided attention of all present and drew out and answered many questions. At the close of his address the members unanimously voted their thanks and appreciation. The time being spent, the remaining part of the program was postponed until the next meeting, to be held at Norwood in August.

Before adjournment Dr. B. L. Johnston presented his application and was accepted as a member of the society.

While the number present was small all felt that an afternoon had been profitably spent.

A. C. AMES, M.D., Secretary.

## BOOK REVIEWS

PRINCIPLES AND PRACTICE OF INFANT FEEDING. By Jules H. Hess, M.D., Professor and Head of the Department of Pediatrics, University of Illinois College of Medicine. Illustrated. Second Revised Edition. Philadelphia: F. A. Davis Company, Publishers, 1919. Price, \$2.50 net.

The brevity and clearness of this book, which has many things to recommend it, enables one to find ready information about the common needs in infant disturbances with reference to their detection and the methods of correction by feeding. For such a small book the subjects of wet-nursing and the feeding of premature infants are fully treated. We would recommend that the general practitioner read what the author has to say on over-feeding in breast babies—a subject to which little or no attention is paid until the intolerant infant demands it. There are many useful points in the chapter on milk dilutions in simple feeding. Digestive and nutritional disturbances are briefly discussed. The clinical classification of Finkelstein for nutritional disturbance is given considerable space, as is the influence of infection on nutrition. The appendix contains much useful information for the student and beginner in infant feeding. This little book would be an addition of definite value to one's pediatric library.

F. C. N.

AFTER-TREATMENT OF SURGICAL PATIENTS. By Willard Bartlett, A.M., M.D., F.A.C.S., and Collaborators. Volumes I and II, with 435 original illustrations and one color plate. St. Louis: C. V. Mosby Company, 1920.

These two volumes are a most valuable addition to the present day tendency to establish a high standard for all surgical procedure and to bring all operative procedure up to this standard. Bartlett has taken a course, characteristic of this careful, accurate writer, that at once arrests and holds the reader's attention.

The entire first volume is devoted to those accidents that are common to the postoperative conditions of most operative cases, such as sleeplessness, hiccough, headache, backache, shock, hemorrhage, acute dilatation of the stomach, postoperative ileus, fat embolism, postoperative burns, acid intoxication, postoperative tetanus, etc. Means of combating unfavorable conditions and of preventing them are then taken up, and we find such conditions discussed as care of the bowels after operation (other than gastro-intestinal), the treatment of postoperative retention of urine and



cystitis, bandaging, the abdominal binder, exercise and massage, postoperative treatment by radium and the roentgen rays in malignancy, protoclysis, hypodermoclysis, blood transfusion, etc. Thus the reader has approached his difficulties from two directions—takes two points of view, as it were.

The whole is so clearly set forth, so entertainingly written, so plainly and carefully illustrated, that its study becomes a delight and one is kept always firmly and surely held to the consideration of correct procedure. There is no tiresome discussion. The writer knows what is wrong. He has experienced it. He tells it so that the reader knows it. He as surely and clearly points out the way of relief.

Volume II takes up still a third phase of post-operative work. Each operation is considered from the standpoint of prevention of postoperative disaster by correct technic in operating, and in draining, suturing and dressing. This gives a third angle of consideration. All that one has been led to expect from a study of the first volume is found in the second; clear, terse, lucid description, based on the experience of one who has carefully observed, intelligently studied, and faithfully recorded and classified the processes that have led to good results, and those that have not.

It is a book to be kept close to one's leisure hour table, and never to be out of reach for consultation. It is indispensable to every one of wide operative responsibilities.

H. E. P.

MEDICAL CLINICS OF NORTH AMERICA, Boston Number, January, 1920 (W. B. Saunders Company).

This number is a compilation of the interesting cases seen in the medical clinics of the Peter Bent Brigham Hospital, New England Deaconess Hospital, Boston City Hospital, Harvard Medical School, and the Massachusetts General Hospital.

THE SURGICAL CLINICS OF CHICAGO, February, 1920 (W. B. Saunders Company).

A very interesting volume describing numerous surgical cases seen in a number of the clinics at the hospitals in Chicago. The book contains 321 pages with numerous illustrations.

A LABORATORY MANUAL OF PHYSIOLOGICAL CHEMISTRY. By Elbert W. Rockwood, M.D., Ph.D., Professor of Chemistry and Toxicology and Head of the Department of Chemistry in the University of Iowa. Fourth Edition, Revised and Enlarged. Illustrated with one colored plate, three plates of microscopic preparations and seventeen engravings. Philadelphia: F. A. Davis Company, 1919. Price, \$2 net.

One of the hazardous probabilities besetting students in medicine and other arts is the penchant which professors often evince to write their own texts and laboratory manuals. This potentiality may eventuate in one of two ways: either the book serves the purpose for which it was intended or it becomes an infliction to the student, and he must either secretly glean his knowledge from some other text or abide by the indifferent compilation of his teacher. We can recall instances of both occasions in our student days in pharmacy and medicine. It is therefore assuring to note Dr. Rockwood's manual on physiological chemistry. It is soon evident that we have in this work clear and concise information of utility for the laboratory worker, without the burdensome hypothetical and theoretical speculations for which, in most instances, the laboratory worker has little if any time. Also, we never permit the number of editions through which a book has passed to predjudice for or against the work, for we have only too often observed books rolled through several editions when they should never have materialized from the latent state of conception in the author's mind. It is easily evidenced, however, in Dr. Rockwood's manual that merit alone has been the guiding factor in carrying the book through its

fourth edition. The medical man of today could indulge in a great many pastimes more dangerous than carefully scanning the pages of Dr. Rockwood's manual for the purpose of reviewing work that is so essential to the proper conception of advanced medical knowledge. For the medical and pharmaceutical student it should prove indispensable.

W. H. T.

OXFORD MEDICINE. Volume 2, Part 1. By Henry A. Christian and Sir James Mackenzie. London: Oxford University Press. American Branch, 35 West 32d St., New York. To be published in Five Volumes. Royal 8vo. Price, \$52.50.

Sir James Mackenzie discusses cardiac diseases, and Dr. I. Chandler Walker bronchial asthma and hay fever.

Dr. Mackenzie deals with his subject in such a clear, common sense way that these chapters on diseases of the heart, cannot fail to be very interesting and extremely instructive to general practitioners as well as to specialists in every branch of medicine.

Dr. Walker divides asthma into three types—typical bronchial asthma, due to anaphylaxis, atypical asthma, the result of bacterial infection, and asthma caused by protein sensitization. This classification is based on the modern view of these conditions.

Hay fever is described as a condition caused by pollen sensitization, food protein sensitization, or by bacterial infections.

To be satisfied with vaccine therapy in the treatment of asthma and hay fever, or in fact, any condition, denotes, to say the least, a rudimentary state of development.

P. T. B.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1920, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

BACILLUS BULGARICUS-SQUIBB.—A culture in vials of the *Bacillus bulgaricus* Type A, the *Bacillus bulgaricus* Type B (*Bacillus acidophilus*) and the *Bacillus paraceticus*, each vial containing 12 Cc. The preparation is designed for internal administration and for topical application (see general article, Lactic Acid-Producing Organisms and Preparations, New and Nonofficial Remedies, 1920, p. 156). E. R. Squibb and Sons, New York.

POLLEN ANTIGEN-LEDERLE (SPRING TYPE).—A liquid obtained by extracting equal parts by weight of dried pollens of timothy, red top, June grass, orchard grass, sweet vernal grass, meadow foxtail, meadow fescue, rye and wheat by a vehicle of 67 per cent. glycerine and 33 per cent. saturated solution of sodium chloride. Each Cc. contains 14,000 pollen units (a pollen unit is the equivalent of 0.001 mg. of pollen). For a discussion of the actions, uses and dosage, see Pollen Extract Preparations, New and Nonofficial Remedies, 1920, p. 236. The product is supplied in fifteen different doses, each dose consisting of 0.1 Cc. of the respective dilution. Each dose is accompanied by a vial containing 9 Cc. of sterile water for diluting the dose to make it of isotonic strength. Pollen Antigen-Lederle (Spring Type) is supplied in packages containing a complete set of fifteen doses, in packages containing sets of five doses and as a diagnostic test consisting of 0.01 Cc. of No. 15 dilution. Lederle Antitoxin Laboratories, New York (*Jour. A. M. A.*, April 24, 1920, p. 1167).

## PROPAGANDA FOR REFORM

SOME MISBRANDED NOSTRUMS. — The following "patent" medicines have been the subject of prosecution by the federal authorities: Mendenhall's No. 40 for the Blood, consisting essentially of potassium iodid, cathartic resins, ammonium acetate, licorice, glycerin, sugar, alcohol and water; Zaegel's Essence, consisting essentially of alcohol, water, sugar and plant extractives, including a laxative substance and a saponin; Zaegel's Lung Balsam, consisting essentially of alcohol, water, sugar and laxative plant material flavored with oil of peppermint; McGraw's Liquid Herbs of Youth, containing essentially Epsom salt, senna, red pepper, quassia, alcohol and water with wintergreen flavor; Jarabe de Abrozoin, composed essentially of terpin hydrate, menthol, benzoic acid, ammonium chlorid, sodium bromid, glycerin, alcohol, sugar and water; Kampfmüller's Rheumatic Remedy, consisting essentially of potassium iodid, plant extractives, alcohol and water; Sal-Sano, containing essentially sodium chlorid, sodium phosphate, sodium bicarbonate and sodium sulphate; Indian Wyanole, consisting essentially of chloroform, ammonia, menthol, glycerin, turpentine-like oils, alcohol and water; Gregory's Antiseptic Oil, consisting of kerosene oil with oil of cloves, cassia, and sassafras with a trace of camphor and pepper resins (*Jour. A. M. A.*, April 17, 1920, p. 1114).

LOOK UP ITS RATING.—The Council on Pharmacy and Chemistry was created because the complexity of modern medicine makes it a physical impossibility for physicians to know the scientific status of the many proprietary remedies which are on the market. As commercial agencies, such as Bradstreet and Dun, report on the commercial probity of individuals and firms, so the Council on Pharmacy and Chemistry reports on what might be called the scientific probity of proprietary and unofficial pharmaceutical products. The commercial agency issues, at no small expense to its customers, rating books; the Council on Pharmacy and Chemistry issues, at a nominal price, "New and Nonofficial Remedies." The commercial agency, for a substantial fee, will furnish reports on business concerns; the Council on Pharmacy and Chemistry, will, without any expense to the profession, furnish reports on proprietary products used for the relief or cure of human ailments (*Jour. A. M. A.*, April 24, 1920, p. 1171).

ADULTERATED OR MISBRANDED MINERAL WATER.—Harris Spring Water, examined by the U. S. Bureau of Chemistry, was found to contain *B. coli* in small quantities, molds and liquefying organisms. Sprudel Concentrated Spring Water was found to contain bacilli of the colon group and also added salts not obtained from the West Baden Springs. American Apollinaris Mineral Water was found not to be Apollinaris Water. Robinson Spring Water was falsely claimed to be effective as a remedy for Bright's disease, diabetes, dropsy, cystitis, gout, rheumatism, indigestion, and kidney and bladder troubles. Ferro-Manganese Regent Water was falsely represented as a remedy for alcoholism, chronic rheumatism, dyspepsia, diabetes, Bright's disease, albuminuria, dropsy, sciatica and insomnia, and was not a natural spring water (*Jour. A. M. A.*, April 24, 1920, p. 1182).

ALKALITHIA.—Keasbey and Mattison Company's Effervescent Alkalithia was introduced at a time when it was believed that the administration of lithium salts served to remove uric acid from the system. The A. M. A. Chemical Laboratory reported that Alkalithia is an effervescent mixture which contains alkaline carbonates and bicarbonates together with caffeine, free tartaric acid and free citric acid and that, as taken, it represents caffeine in solution of alkali tartrate, citrate and bicarbonate containing free carbonic acid. The Council on Pharmacy and Chemistry declared Alkalithia inadmissible to New and Nonofficial Remedies

because the claims made on the label and in the circular accompanying the trade package led the public, to its detriment; to depend on this preparation and because the therapeutic claims are unwarranted (Reports Council Pharm. and Chem., 1919, p. 65).

ARHOVIN OMITTED FROM N. N. R.—Arhovin is a solution of diphenylamin, thymol benzoate and ethyl benzoate marketed by Schering and Glatz, Inc. The Council on Pharmacy and Chemistry reports that it was omitted from New and Nonofficial Remedies because the therapeutic claims made for the preparation were unwarranted (Reports Council Pharm. and Chem., 1919, p. 66).

CHLORON, CHLORAX AND NUMBER "3."—The Council on Pharmacy and Chemistry has examined Chloron, Chlorax and Number "3," manufactured by the Chlorine Products Company, Inc., New York. The products have been declared inadmissible to New and Nonofficial Remedies. The report of the Council—which, in accordance with the usual procedure, was submitted to the Chlorine Products Company before its publication was authorized—sums up the Council's findings thus: 1. All are of unreliable composition. 2. The therapeutic claims made for the preparations are not substantiated by evidence and are unwarranted and misleading. Chloron is inferior as an antiseptic to the well-known surgical solution of chlorinated soda because of its low chlorin content and uncontrolled reaction. There is no warrant for the claim that Chlorax is useful in the treatment of "Kidney Conditions," "Diabetes," "Acute Infections," "Blood Dicrosias," "Lithemias and Rheumatism," and "Nervous Conditions," nor is there warrant for the claim that "Number '3'" is a "blood purifier" or a "syphilis remedy." 3. The names of these pharmaceutical mixtures are not descriptive of their composition. 4. All three preparations are irrational. No evidence has been furnished that the lithium salt is of value in the mixtures. It is not rational to combine an active chlorin preparation and a mercury salt in one mixture, nor is there evidence that the addition of opium to the preparations proposed for internal use is of value or rational. Experimentation with Number "3" as a "syphilis remedy" is to be severely condemned in that those on whom it is used will, in the meantime, be deprived of efficient medication (Reports Council Pharm. and Chem., 1919, p. 70).

ELARSEN OMITTED FROM N. N. R.—Elarsen, now sold by the Winthrop Chemical Company, Inc., was formerly sold in the United States by the Bayer Company, Inc. It was admitted to New and Nonofficial Remedies in 1914. The Council on Pharmacy and Chemistry now reports that Elarsen has been omitted from New and Nonofficial Remedies because it is sold under unproved and, consequently, unwarranted claims and because, in the light of investigation, it is an unscientific and relatively useless article. The Council also reports that Elarsen has not been shown to have advantages over Fowler's solution but that, in some respects at least, it is inferior (Reports Council Pharm. and Chem., 1919, p. 75).

FORMICIN OMITTED FROM N. N. R.—Formicin, manufactured by Kalle and Company, A. G. Biebrich a/Rh., Germany (Kalle Color and Chemical Company, New York, U. S. agents) was admitted to New and Nonofficial Remedies in 1912. The Council on Pharmacy and Chemistry reports that while the claims recently made for Formicin were essentially those made when the product was first accepted, these claims were questioned because further experience had not established the usefulness of the product. As the Kalle Color and Chemical Company presented no evidence to establish its therapeutic efficiency, the Council directed the omission of Formicin from N. N. R. (Reports Council Pharm. and Chem., 1919, p. 76).



# THE JOURNAL

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### SYMPOSIUM

#### THE USE OF RADIUM IN CARCINOMA OF THE FACE, JAWS AND ORAL CAVITY\*

ELLIS FISCHEL, M.D.  
ST. LOUIS

The recognized treatment of carcinoma is by operative removal, by destruction with roentgen ray, radium, high frequency current, or actual cautery. Operative removal is the most spectacular method and in many cases gives the quickest result with least disability to the patient. Operation carries with it nervous shock, traumatic shock, danger from anesthesia and hemorrhage; these factors make the immediate mortality from operation in extensive carcinoma involving the oral cavity a matter of grave consideration both to patient and surgeon. The ideal operation for cancer no matter where located comprises the removal at one operation of normal tissue surrounding the tumor together with lymph glands and lymph channels which drain the area occupied by the tumor. Such operations should now be physiologically possible in carcinoma of the lower lip, tongue, floor of the mouth, upper and lower extremities, breasts, uterus and penis. All these operations are mutilating, yet the average patient can be brought to accept them at a reasonably early stage in the disease.

Destruction of carcinoma by the high frequency current and the actual cautery has much to recommend it. We have a definite positive action on the malignant tissue without opening fresh blood and lymph channels. Healing of the wound is slow because devitalized tissue must first undergo sloughing before repair can begin.

If carcinoma could be destroyed by simple exposure to rays from the roentgen tube or from radium the disease would lose much of its terror. The roentgen ray will cure nearly 100 per cent. of basal cell epitheliomata of the face.

\* Read at the Sixty-Third Annual Meeting of the Missouri State Medical Association, Jefferson City, April 6-8, 1920.

In its present stage of development it cannot be relied on to destroy the more malignant types even on the surface, and when the lesion is located within the oral cavity I have yet to observe a single case benefited by its use.

In what way does radium differ from the rays of the roentgen tube? The properties of the alpha, beta and gamma rays from each are very similar. With modern apparatus roentgen rays of any desirable strength and penetration are obtainable. With radium, the strength and penetration of the rays are limited only by the quantity of radium at hand. Theoretically, with the correct knowledge of the physics of radium and of the roentgen ray and with adequate apparatus, similar results could be obtainable. This is undoubtedly true of skin growths which are easily accessible. The dosage, distance and screening, can all be determined and measured with the greatest accuracy; but in cavities where distance is hard to measure, where it is advisable to protect normal tissues from the effects of the rays, roentgen rays are at a great disadvantage. Also in tumors of considerable thickness where the tumor tissue itself acts as a factor for distance and screening, the dosage of roentgen ray cannot be as accurately determined as the dose of radium, an absolutely known quantity of which can be buried in the tumor mass itself.

There is another factor which enters into the success of any method of treatment, viz., the character of the malignant growth. *Most* basal cell epitheliomata can be cured by any method of treatment. *Some* squamous cell carcinomata are of low malignancy and are readily destroyed. *Most* prickle cell carcinomata are very resistant and are prone to extensive diffusion beyond any visible or palpable limits of the disease. These are the common forms encountered about the face, jaw and oral cavity. A basal cell growth can usually (but by no means regularly) be differentiated clinically from the other types. The history of the rapidity of growth will help determine the comparative malignancy of prickle or squamous cell types; but while there may occasionally arise a case where it is justifiable

to try a method of cure which will conserve as much normal tissue as possible, the only attitude of mind which offers the best chance to the patient to be cured is to destroy the tumor just as thoroughly as possible *at the first attempt*, be the means of destruction what they may. An incomplete operation is worse than none at all. The roentgen ray and radium alike have been observed to stimulate rather than retard malignant growths. And it is truly pitiful to see the numbers of trusting patients who have had their chances of cure taken from them by a hopelessly prolonged use of radiation.

The use of radium in carcinomata of the face, jaws, and oral cavity has become sufficiently standardized to enable us to appreciate what can be expected from it. The material for this article has all been collected from the Barnard Free Skin and Cancer Hospital. The cases are selected ones only in so far as they serve to illustrate a demonstrated useful application of radium. All cancer patients (except the gynecologic) are presented at a conference of the entire staff. This conference decides the method of treatment to be applied—be it radium, roentgen ray, or some form of operative interference. The extent and nature of the operative work is left to the judgment of the surgeon. The amount of radium, the time, distance and screening are prescribed by the conferees. The hospital has acquired 100 mg. of radium in tubes, a 10 mg. plaque and a 10 mg. needle. The use of the plaque has been restricted to the superficial basal cell growths. The tubes have been the routine medium for the application of radium, the amount, time of exposure and screening of course being varied for the different cases. As was natural with an element of (to us) unknown power, we started rather cautiously with comparatively small doses and heavy screening; the results were encouraging but not satisfactory as we found a large percentage of either extension of the disease or early recurrence. This led us to increase the dosage and to diminish the screening until now we treat with confidence and with good results lesions formerly relegated to the surgical service for more certain methods of removal.

As has been stated previously, most of the carcinomata of the face will yield to any recognized method of treatment which is efficiently employed. Then why use radium on any of the growths? All other things being equal, that remedy is to be preferred which least upsets the routine life of the patient. The application of radium to a surface tumor can be done with less "to do" than any other method of treatment. It has the one great advantage over the roentgen ray in that the maximum dose can be directed over an absolutely exact area. This feature is strikingly brought out in reference to malignant tumors of the eye-lids. Here radium can be used in sufficient dose to destroy the

growth in one application without damage to the globe, impairment of vision, or subsequent scar distortion of the eyelid. Many growths of considerable depth and extent, especially about the nose, can be destroyed with radium with a minimum of scar formation.

An interesting development in the technic of radium application has been in the treatment of carcinoma of the lower lip. An operation of the Stewart type has given a fair percentage of cures even in extensive growths. We of the surgical service were at first loath to see a "favorable case" for operation "tried out" with radium. But with large initial doses, with little screening and using "cross-fire" exposures, results became so striking that now we reserve operative interference for those cases which have had unsuccessful plaster or operative interference before reaching us and which are good operative risks. My present view as to treatment of carcinoma of the lower lip is to use radium in large, unscreened dosage on the primary lesion. If no glands are palpable, wait three months after the first radiation, then remove the submental and submaxillary lymphatic system. In case the submental gland is already palpable with no other suspicious glands, wait six weeks after the first radiation before resecting the glands. If the submaxillary glands are unquestionably involved, radiate the lip and perform the Stewart type of operation within one week; later, all the superficial and deep lymphatic tissue of both sides of the neck should be removed.

Radium within the oral cavity has not proven an altogether satisfactory destructive agent. In leukoplakias which have just begun to change into malignant growths radium is the only treatment which can be classed as efficient. In the verucca-like epithelial masses which are occasionally met with on the buccal mucous membrane and alveolar processes, radium acts like magic. But in outspoken ulcerating carcinomata we have yet to record a complete clinical retrogression. The reason for this lack of success I feel sure is a purely technical one. It is a difficult matter to make a surface applicator which can be maintained in one position within the mouth, or if the applicator be firmly fixed the soft parts to be radiated will not remain steadily apposed. The solution of the technical side of the problem I believe lies in the use of needles which can be buried in the tissues and fixed wherever desired. We have observed one case of inoperable carcinoma of the lip, tongue and floor of the mouth become operable following the use of radium, and there is no reason why as favorable or even better results should not more frequently be obtained. It is still a field open for wide investigation which, however, should be carried out on frankly inoperable cases, since to employ radium alone on a case which has a chance through proven methods



of operative interference is manifestly unfair to the patient.

One of the most valuable uses of radium is in conjunction with operative measures. We have made it a rule that whenever carcinoma involves the bones of the upper or lower jaws we advise operative removal. If the growth be at all extensive, no matter what technic may be employed, an operator usually feels that at least at one point he would like to have destroyed a little more tissue. Radium, heavily screened, may be placed any where desired in an operative wound and, theoretically, its influence on remnants of malignant growths should be strongly felt. For instance, we have a case of extensive carcinoma of the maxillary antrum which has remained well fifteen months after operation supplemented by the use of radium in the apex of the antrum. It is this flexibility of radium which permits its use on any surface or in any cavity which gives it such tremendous value as a therapeutic agent.

#### SUMMARY

1. Radium can be relied on to heal carcinomatous ulcers of the face.
2. Radium is the most efficient method of treatment of carcinoma of the eye-lids.
3. Radium has replaced operative treatment of carcinoma of the lower lip in a large percentage of cases. Tributary glands should be removed by open operation.
4. The initial dose of radium should be the maximum one deemed necessary for the complete destruction of the carcinoma.
5. The persistent use of radiation after demonstrated failure of the growth to respond favorably is to be condemned.
6. Radium has limited use in carcinoma of the jaws and buccal cavity.
7. As an adjunct to surgery, radium is probably of very great value, as its small bulk, diffuse and powerful action, permit it to be implanted in small cavities otherwise inaccessible to any method of approach.

400 Metropolitan Building.

#### THE ACTUAL CAUTERY IN THE TREATMENT OF SUPERFICIAL CANCERS\*

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ST. LOUIS

Cancers of various histologic and clinical types often react differently to any given form of treatment. A procedure that might be highly successful in one type of cancer might utterly fail to prevent recurrences in a certain other type, and vice versa; and its persistent use in treating such unsuitable cases to the exclusion

of known more successful methods would at least be professional heresy. We endeavor to study each type of cancer separately and apply to it the mode of treatment known to be most successful with it; to find something better than we now possess; or failing in that, to improve our technic in present methods. With such ideals in view, we feel that we need offer no apology for this effort to revive interest in the actual cautery, one of the oldest yet most effective agents in the eradication of certain forms of cancer.

Those lesions most suitable for cauterization are the superficial cancers variously known as rodent ulcers, epidermoid or basal cell carcinoma, which tend to remain localized and are usually of comparatively slow growth unless stimulated by ineffective methods of treatment. They occur most often about the nose, eyelids, cheek, ear, temple, etc., and at first are mere rough scaly spots or tiny nodules, later becoming ulcers with a rolled border.

The types of cautery used have been the electric wire loop, the ordinary soldering irons of assorted sizes and shapes, and the high frequency current, each having a particular advantage in certain cases. The work has been done by or under the supervision of Drs. Leighton, Fischel, Landree, myself and the intern staff, with practically uniform results. We limit the curative use of the cautery alone principally to the above named conditions and do not attempt to substitute it for clean surgery or radium where these are preferable. We do not recommend its use in operable squamous cell cancers where metastases occur early, as on the lower lip, breast, etc., where gland and lymphatic dissections are imperative; although an occasional local cure does result if neighboring glands are subsequently removed.

Our technic usually consists in injecting a local anesthetic into a zone 1 or 2 cm. from the lesion, entirely around and well beneath it, using great care not to pass the needle into or even very near cancer tissue, as implantations may result from cells which adhere to the needle. Nerve blocking is ideal where feasible.

The area to be excised or destroyed is then outlined by lightly cauterizing the skin entirely around the lesion, keeping well away from all visible or palpable borders of the lesion. Generally, with large lesions, 1 to 3 cm. of healthy looking skin should be sacrificed, depending on whether the tumor edge is distinct or not. For lesions less than 1 cm. whose margins are sharply defined, 4 to 8 mm. of healthy looking skin is included for destruction. This preliminary outline insures destruction equally well on all sides of the cancer. If soldering irons be used, the adjacent skin should be protected by asbestos, wood or dry gauze.

The electric cautery loop at a dull red heat cuts like a scalpel, and with this hot loop the

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entire lesion is first excised from the skin along the previously marked outline and is then dissected free from underlying structures. At the proper heat it does not char, but seems to melt the tissues apart, blocking lymphatics and controlling practically all hemorrhage as it cuts. This freedom from capillary oozing easily permits the gross differentiation of normal from pathologic tissue, and the heat at once kills any adherent tumor cells accidentally cut into, and thereby makes implantations of cancer impossible — a decided advantage over the knife. When properly controlled, the small amount of radiant heat from such a tiny loop has permitted us to do delicate dissections along tendon sheaths, dura, and even veins; and to remove portions of eyelids (the globe protected by wood) without causing those structures to slough. This method saves the specimen for microscopic examination but, most important of all, removes in a few moments' time the entire area known to contain tumor cells, a factor of safety not present with any other form of treatment except clean excision, for radium and roentgen ray are presumed to disintegrate the tumor cells without much damage to normal ones, and recurrences after their use are not infrequently seen.

The ultimate success of these cautery excisions is limited only by the judgment of the operator as to the boundaries of the cancer and his ability to get beyond them, a factor necessarily present in any form of treatment. Any cells left behind will keep on growing, and a recurrence result requiring further cauterization. An additional factor of safety is afforded by the zone of devitalized tissue, usually 1 to 4 mm. beyond the line of excision which later sloughs away. Possibly the radiant heat, like roentgen ray and radium, is more destructive to cancer cells than to normal tissue and an additional zone be thus created in adjacent normal undestroyed tissue where such tumor cells would be destroyed. Such a zone of slough or further possible tumor destruction is of much greater extent following the use of soldering irons at just below red heat because much more heat is radiated. Irons are to be preferred in large or extensively adherent areas and on ulcers destroying bone. They are always reliable whereas electric cauteries are often out of repair.

Cautery wounds are usually not painful unless bone has been involved; in the latter case the pain may be severe for several days. The slough usually separates from the soft tissues in from one to three weeks and is replaced by healthy granulations which epithelialize readily, leaving a smooth, soft, pliable, inconspicuous scar, often equaling the excellent cosmetic results noticed in radium scars. In larger or deeper areas the scar contracts into a raised line. Skin grafts are advisable when the granulating surface is large. Vaseline and oily dichlor-

amin-T are the principal dressings used, though iodoform or balsam of Peru are both excellent. Bone sloughs are slow to separate, requiring from one month to possibly a year. Granulations through bone may be obtained by drilling holes down to the underlying vital tissue, performed here since 1909 (Case No. 764) but not reported. Law<sup>1</sup> has given an excellent description of this method. Although we dislike such slow healing we believe it far better to have exposed bone in a wound free from tumor, for any tumor cells not quickly destroyed by treatment gradually become more resistant and are often stimulated into increased rapidity of growth and might soon become inoperable.

Caustics are principally the weapons of the cancer quack and the inexperienced physician and, although enough tissue is sometimes destroyed to effect a cure, the pain is intense for days and the resulting scar unsightly; the depth and extent of their action is never subject to such accurate control as with the cautery knife; and the numerous cases that have consulted us later have invariably shown marked rapidity of tumor growth since caustics were applied.

In our series of cases cauterized at the Barnard Free Skin and Cancer Hospital since June, 1918, about seventy-one tumors occurring in fifty-nine patients and classified on admission as operable cancers, each varying in size from a few mm. to 4 or 5 cm., either capable of being removed or actually were removed under local anesthesia, are here considered. Of the above class of seventy-one cases, 94 per cent. were destroyed by one cauterization, while 6 per cent. later showed a small recurrence which was destroyed by a second cauterization. One of the above cases entered the hospital with seven such lesions about the face and in addition a hopelessly inoperable carcinoma of the lower lip and chin from which she later died; but the facial lesions were then well and are listed as clinically cured lesions. Seventeen of the above were cases where insufficient radium previously used had either failed to remove the growth entirely or else the tumor had recurred in the radium scar and were referred to the surgeon because of the more rapid action of the cautery. With the one exception mentioned, all the other patients so far as known are still free from any recurrences.

In those cases so extensive as to require a general anesthetic and the tumor considered as probably inoperable, cauterization as thorough as possible was done; and of the nineteen cases so treated, 25 per cent. are still apparently cured. Several others had a local cure but died later of metastases known to be present at the time of the operation. One case apparently free from recurrence died later of erysipelas, a condition frequently seen in ulcerated cancer cases

1. Law, A. A.: *Avulsion of the Scalp*, Surg., Gynec. & Obst., 1914, Vol. XIX, p. 229.



whether untreated, excised with the knife, or cauterized; but most cases recover from the attack. Palliative cauterizations are often done on foul, inoperable conditions, without hope of cure but for the purpose of cleaning up the mass and for the temporary relief usually afforded. In addition to the above classes of cases the cautery is used extensively in connection with clean excision to destroy tissue in suspicious areas; but suture of the wound with primary union is much more difficult where tissues have been cauterized. We also use it to remove sections for pathologic examination and to make a bed for radium in the center of an otherwise inoperable case, enabling radium to destroy the tumor if possible without much injury to adjacent important structures.

The cases whose photographs are shown on the screen today are typical of the results obtained and, though plastic operations are often necessary, they are all results of spontaneous healing except the case where bone was removed and two or three others where skin grafts were applied.

This series of cases includes only those whose treatment and condition have been personally observed by the writer, and the time elapsed is admittedly short; but nevertheless many cases so treated since the beginning of the hospital fifteen years ago have remained free from recurrences for periods of three years or more and may be reported later. However, we earnestly believe that any form of therapy which at only one application apparently destroys 95 per cent. of these early superficial basal cell carcinomata and with but two treatments has proved nearly 100 per cent. effective, yet giving reasonably good cosmetic results, as the actual cautery has done in our hands, is worthy of the highest commendation and a more extensive use.

316 Metropolitan Building.

#### THE MODERN TREATMENT OF MALIGNANCIES\*

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A study of the causes of death in the United States for the year of 1918 shows that influenza caused 16.6 per cent. of all deaths; pneumonia, 15.8 per cent.; heart disease, 8.5 per cent.; tuberculosis of lungs, 7.4 per cent.; deaths from external causes of all kinds, 5.6 per cent.; acute nephritis and Bright's disease, 5.4 per cent.; cancer, 4.4 per cent.; making cancer as a cause of death seventh in the list.

One would not think that cancer causes almost as many deaths each year as the total of all accidental falls, suicides, railroad accidents and

injuries, automobile accidents and injuries, burns, accidental drowning, homicide, accidental absorption of deleterious gases, mine accidents and injuries, machinery accidents and injuries, street car accidents and injuries and injuries by other vehicles than those mentioned above, effects of heat other than burns, and other external causes; and yet this is actually true, if our death rate statistics are to be taken seriously.

In the year 1918 there were over 65,000 deaths in the United States from cancer. The death of 65,000 people from cancer each year is bad enough, but when you stop to think of the years of suffering that these people go through, that is even more serious.

Put the life of a cancer patient at three years and you have a total of about 200,000 people suffering at all times from this disgusting and painful condition. If you put the length of life at more than three years the amount of suffering is increased that much more. It is possible that the average age of the cancer patient is not three years, and if such be true my figures are a little overdrawn. In this computation I have only taken into consideration the cases that die, not counting the cases which are cured, which would run the total number of cases much higher than these figures would indicate.

But after studying the above, one may well consider seriously what is the best treatment known at this time for this class of cases. Are we getting knowledge that enables us to lift this class from the incurable to that of curable? Are we doing our best for these cases, or are we in a hopeless state of mind, feeling that there is no cure and that we need not exert ourselves but just ease them along with whatever may be at hand? We have been taught as far back as we can remember that cancer is incurable. Small wonder then that we acquired the habit of thinking of these cases only as incurable. Every one knows the many so-called cures that have been advocated in times past, and many cures seem to have resulted, but sooner or later each "cure" has been cast aside as not being a cure.

For many years surgery has held first place, and rightly so, for early operation has always offered the most hope. And I am not here to say that today we have gone so far ahead in the handling of these cases as to prove that we have discovered anything better than surgery. But you know that surgery has its limitations and a large percentage of failures, and we feel that at this time we have progressed so far that we are able to offer surgical methods additional help that will increase our percentage of cures very materially.

We are no longer justified in merely "cutting it out" and then allowing the percentage of recurrences still to be high and make the mortality what it is now.

I would not have the presumption to stand

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here before surgeons, some of whom were doing surgery before I was born, and say that by any modern method we can do away with surgery; but I do say that we can make your percentage of cures run so high that you will be much surprised at the results obtained.

I feel with nonsurgical methods we can accomplish better cosmetic results in many cases; that in cases which are nonsurgical we can raise the percentage of cures; and in the distinctly inoperable cases we have powerful palliative agents which materially relieve pain, discomfort, and odor, and many times do bring about a cure in what had been thought were distinctly inoperable and hopeless cases.

The agencies which I have been referring to are: roentgen ray, radium, electrothermic coagulation, diathermy, and ultraviolet ray. Nothing new and startling, but agents of such worth that they should no longer be neglected.

The roentgen ray has proven its worth, as has radium, but still men who are doing this line of work see patients going from bad to worse, day after day, when the course of the disease could be slowed down or stopped entirely if we could only be allowed to help the surgical treatment. So I am here today to plead the cause of the patients with malignant growths, for I know that these people are not being given the benefit of the later experiences in this line.

I do not think it is necessary to discuss before a general assembly like this the actual technic of the work, for this is only of importance to those who are doing this line of work exclusively, but I might state here that the man who is doing only this line of work will do only the work which is fair to the patient, for specialists are not made over night in this branch any more than in any other special line.

In order to do good roentgen ray work a man must have modern equipment, properly installed with proper meters for accurately measuring the dosage, for the roentgen ray is a powerful agent and proper dosage is necessary in order to do the most good without doing harm that brings the treatment into disrepute. Likewise, in the use of radium. It is not enough to own an indefinite amount of radium and apply it indiscriminately to every condition presented, for it is also a very powerful agent and can be of very great service or, if improperly used, of great injury to the patient.

Electrothermic coagulation and diathermy are valuable for the destruction of malignant cells by electrically generated heat and are only a modernization of the old cauterizing surgery, with a greater range of usefulness. Percy has well shown the value of the low heat cauterizing when applied to uterine cancer, and electrothermic coagulation and diathermy make use of the same fact, namely, that comparatively low temperatures will destroy the vitality of malignant cells

after a short time. This line of treatment is applicable to a long list of conditions while the usefulness of Percy's method is limited to uterine cancer; and even for that condition it is quite probable that the direct application of radium to the parts would give better results and that without pain, danger, or discomfort.

Physicians and surgeons confine their reading too much to their own line of work and consequently are not as familiar with the work in other lines as they should be. However, I am not here to attempt a technical exposition of this subject at all, but only to stimulate thought and study along lines which have been giving good results of late years—better results than we formerly attained.

By way of illustration, here is the way a breast case should be handled, according to modern methods: The case should be thoroughly rayed before operation, for this preliminary raying blocks the lymphatics and lowers the vitality of the malignant cells. The delay of the operation for a day or two is of little consequence as compared to the good done the patient. Then after the breast has been removed, turn the skin flaps back and gives a massive roentgen-ray dose directly into the wound. The operation is then finished, and postoperative raying can be begun as soon as the patient has recovered from the shock of the operation.

There seems to be an opinion prevalent that postoperative treatment should not be begun until the wound is entirely healed, thus causing a delay sometimes of several weeks; this delay is of much danger to the patient. Also the preliminary raying is carried out by only a few men. A thorough raying before operation, a thorough removal surgically, and active postoperative treatment, will run the percentage of cures so high that we can feel proud of our work. I have outlined the handling of breast cases because they form a large percentage of the more malignant cases, but this can be used as an illustration of what should be done in the large majority of malignant cases, except the true skin cases; the latter can usually be handled quite successfully with nonsurgical treatment and leave a better cosmetic result than can be secured by surgery. Cancer of the tongue and cancer of the lip should be rayed thoroughly before operation, paying special attention to the glands draining the parts. These areas are more important than the parts occupied by the tumor and should be thoroughly treated whether they show involvement or not.

In the breast cases, not only the breast should be treated but the axillary and clavicular regions should be thoroughly rayed; in fact, the entire chest should be treated thoroughly, cross-firing from every area possible, going around the entire chest.

This method holds good for malignancies in the pelvis also, cross-fire from as many areas



as possible going around the entire body. In the vagina also there should be the application of radium in addition to the roentgen ray from the outside. This applies to preoperative treatment as well as postoperative. Malignancies about the prostate and bladder should be handled in the same way. The radium may be inserted into the bladder, or in the prostate cases, the radium needles can be pushed directly into the mass, and then the roentgen ray applied from all areas about the lower trunk.

In all cases of this class, if any of them are considered inoperable, this line of treatment carried out carefully will result in much relief to the patient and may bring the case to an operable state.

In cancer of the cervix, many inoperable cases have been cured by radium, and many more have been brought to an operable condition by the direct application of radium to the parts. Cases of recurrence following hysterectomy have been wonderfully helped by the application of radium high in the vaginal vault, also by the application of heat generated in the tissues by the electric current.

Summing up, then, one would say that the modern treatment of malignancies consists of thorough raying before operation, careful surgery, followed immediately by thorough raying, and this continued over several months. This treatment by the ray is always in order, even in the completely hopeless cases, as much suffering is relieved, toxemia lessened, and the patient made more bearable to those about him.

Can we not then give more attention to our malignant cases and use every means for alleviation or cure, and by doing so, make statistics show a decidedly smaller number of deaths from malignant disease?

805 McGee Street.

#### INOPERABLE CANCER \*

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The program this morning on cancer would be incomplete if we did not consider the sad phase of this subject—inoperable cancer. The large number of patients with inoperable carcinomata appearing at the Barnard Free Skin and Cancer Hospital in the course of a year furnishes the reason for this paper, and I feel that it is not out of place but absolutely necessary to bring this subject to the attention of the physician with the purpose of impressing on him the necessity for an early diagnosis in cancer.

There is always a time in the history of cancer when the lesion is curable; but if it is allowed

to run on untreated, or is treated inadequately, the result sooner or later is a hopeless, inoperable condition and the patient is doomed to an early death.

Preventive medicine and surgery has been the aim of physicians for years and must continue so as far as cancer is concerned until a cure is found for this disease which, in its late stages, is one of the most distressing afflictions known.

The responsibility for the inoperable condition in which these patients present themselves seems to me to be dependent (1) on the quack cancer specialist who applies irritating remedies which only spread the disease; (2) on the patient who neglects to consult with the physician, or fails to take his advice of surgical intervention; (3) on the physician who first sees the case but fails to recognize the disease or, recognizing it, procrastinates in seeking the advice of the surgeon, or attempts superficial surgery.

1. The histories are many in which we read "Patient was treated by an advertising cancer specialist with pastes of one sort or another, later had a recurrent nodule and again a like application made. The patient during this treatment suffered the tortures of the damned." Sooner or later a realization of his frightful condition sends him to a physician who informs him of the truth. He then consults the surgeon.

2. The refusal of patients to submit to surgery is often based on an erroneous conception of what surgery offers. The patient is deceived by the ill advice of meddling friends who have seen bad results follow incomplete operations. The literature of cancer quacks is full of warning against the use of the knife; and this insidious teaching is scattered broadcast and outweighs in many instances the advice of the best of surgeons. The patient in his perturbed state cannot distinguish fraud from truth and often listens to the siren who promises everything, or puts off operation until all hope is gone.

3. The failure of the physician to make a diagnosis of cancer in the early stages in many instances results in the patient coming to the surgeon too late for cure or even effective treatment. We are taught in our medical course to always suspect syphilis. Why are we not taught to be suspicious of cancer? It is a very prevalent condition. Its onset is insidious. In its early stage it is so superficial that it can be most readily removed. The late Dr. Maurice Richardson used to liken the spread of cancer to a lighted match dropped in a barnful of hay. If stepped on immediately it could be easily stamped out, but if allowed to get under headway the whole city fire department would be unable to save the building.

If unable to diagnose a lesion which in the

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slightest degree tends to chronicity, consultation is the only safe measure. We owe to our patients the best that can be given, for in early diagnosis depends his chance of cure.

In reading the history of these cases of inoperable cancer we find, for instance, that the patient with a small nodule in the breast had consulted the physician early, but the physician either had not recognized the trouble, or had failed to give sound advice, replying to her inquiries as to what should be done: "Oh, go home and forget it; it does not amount to anything." This was an actual occurrence with the result that the patient, finally becoming alarmed about her condition, consulted a surgeon who recognized the disease. A radical operation for removal of the breast was performed and although there was no local recurrence, she died within a year of the most widespread metastasis I have ever seen.

There are a great many histories which show that the disease either had not been recognized in its early stage by the physician or else salves or plasters had been applied; the disease in the meantime progressed from bad to worse. We have seen a great many instances where carcinomatous nodules had been incised under the impression that they were inflammatory in character; but least excusable are the many cases where the lesion was recognized and only superficial surgery was performed, such as the excision of a piece of the lip or breast, when a more radical operation should have been undertaken.

The diagnosis of cancer, that is external cancer, is, as a rule, not very difficult. Ulcerations that do not tend to heal readily by simple means should arouse our suspicion. In these days of the clinical laboratory one does not allow syphilis to go undiagnosed when a Wassermann test can be readily made. Syphilis is always suspected. Why not be as suspicious of the possibility of cancer? There are over 60,000 deaths from cancer annually in the United States.

The cancer quack, in the literature which he sends out, says every lump in a woman's breast is cancer. Also, every chronic ulcer appearing on a man's lip is cancer. If he stopped there he would not be so far wrong and might do some good. But his propaganda is for the purpose of fleecing the ignorant victim out of his money; and by a very harmful method of treatment, he only transforms an operable cancer into an inoperable one.

Tumors of all descriptions should call for early investigation. If cancer is to be diagnosed only when we have pain, glandular involvement and cachexia, we would save very few patients. We must be on our guard so as not to overlook this insidious disease. We must educate not only the laity but even the physician to the fact that early diagnosis and early operation will cure a large percentage of cancers.

Before considering the treatment of these cases it may be well to define just what we mean by inoperable carcinoma. The term inoperable is susceptible to various interpretations. It is customary to consider a tumor inoperable which cannot be removed without grave danger to the patient's life, or which holds out very little hope of cure by surgery. On the other hand, a tumor may be operable and removable even though internal metastasis renders it incurable.

What shall we do for these cases? It is very unpleasant for the physician and certainly discouraging to the patient to turn him away without offering him some hope of relief. Even when the case seems hopeless I am inclined to offer surgical aid if there is the slightest chance of improvement; although we are often censured by our confrères I feel that we should not hesitate if the patient, after a plain statement of facts, is willing to take the risk. At times we have been most agreeably surprised to improve the condition of the patient and have occasionally effected a cure.

Too many physician take the stand of one I talked with a short time ago. After describing a breast tumor which had undergone ulceration he replied to my question as to what he intended to do for it, "Oh, it is inoperable." But when asked his reason, he did not know whether the tumor was fixed to the chest wall or how much glandular involvement was present; his main reason seemed to be that nothing could be done because the tumor was ulcerating. He was assuming the responsibility of letting the patient go from bad to worse and depriving her of much relief even though it might be only palliative in character.

Palliative operations should be attempted whenever possible, such as the removal of ulcerating and offensive masses. Cauterization by the actual cautery, or electric desiccation and an electrothermic coagulation, may accomplish wonders in eradicating a disgusting condition, and deep roentgen-ray therapy following the removal of the skin as suggested by Beck has given excellent results. Much can be done to relieve patients so terribly afflicted.

In conclusion I wish to say that the prevention of this condition lies to a certain extent in the hands of the physician. He should always be on his guard to recognize this disease. He should suspect cancer and if uncertain should not hesitate to call a consultant. His patient will thank him in the end. There are many ways to educate the public. It is a common thing in the city for societies to have talks on subjects pertaining to health, and I am sure this need not be confined to the city since the country practitioner has as many opportunities to do the same thing.

The earlier the diagnosis of cancer is made the more hopeful the prognosis. Therefore if we are to improve the mortality in the next decade



it must be through an awakened public sentiment as to the dangers of cancer and the possibility of cure when operations are performed early in this disease.

305 Lister Building.

### DISCUSSION

DR. J. D. GRIFFITH, Kansas City: I do not like to think of these exceedingly interesting and profitable papers going by without discussion. These men have expended a lot of hard work on them and they have shown us that a great deal can be done for that dreaded foe, cancer.

Dr. Blair has shown us very plainly how these troubles about the mouth, if diagnosed anywhere in the early stages, can be completely eradicated. I was very much interested in the treatment of cancer by radium and the roentgen ray as has been shown here. There are some questions I would like to ask in regard to the ray. First, we know that the majority of skins can be burned or irritated by the roentgen ray, but I would ask what part of the roentgen ray is it that irritates the skin, and if that part could be excluded would it have this same influence on the material surrounding the cancer cell or whatever cell it happened to be. I would also like to ask if it is the gamma ray which seems to do this harm, and if it is and this were screened away would the effect be as good on the cancer?

I would also like to know what form of sarcoma is most amenable to treatment by the roentgen ray, whether it is that form known as large cell, or the spindle cell, or the cells of Ewing, and how he can tell whether he is getting the good effects of his ray on these three varieties of sarcoma.

Speaking of the use of radium, I have used it some, but particularly in adenocarcinoma of the os, and the only one I have seen get well was one in which that was used. I have never succeeded in curing but the one, and I suppose that was due to radium. I do not know, maybe it would have gotten well without it. The doctor spoke of myelogenous sarcoma, and that is one in which the roentgen ray did not seem to have much effect. But I tell you, gentlemen, there is danger in using radium in the uterus. I had an experience of putting in 50 mg., covered, in a case of adenosarcoma, leaving it in eight hours. The woman seemed to get along all right for two or three days. On the fourth day her temperature came up and there was a feeling of soreness over the abdomen. Immediately following this was a sharp acidosis, the temperature rapidly rising, and death. I am satisfied from the way the thing behaved that I had a complete necrosis of the uterus itself from this radium. The bladder, the rectum nor anything else was affected. I want to congratulate these gentlemen on their papers.

DR. HENRY J. SCHERCK, St. Louis: I cannot resist in the beginning to compliment the men who have read these papers, particularly those whom I know personally from St. Louis, because we know of the investigations and thorough work they have been engaged in and the experimental work along the lines of improved therapy; especially I may mention the work that is being done at the St. Louis Skin and Cancer Hospital and at the City Hospital by Drs. Blair, Leighton and Coughlin and their associates. Their work marks for St. Louis an epoch of thorough and scientific investigation along the line of cancer therapy.

As far as I am personally interested, the types of cancer that I come in contact with more frequently as the years go by are two: cancer of the bladder, those which result from papilloma of the bladder, and cancer of the prostate. So far as operative procedure by the different methods on the bladder is concerned, heretofore our results have been very poor.

If the papilloma is at all advanced operative procedure very frequently intensifies the condition and hastens the extension of the growth. Since the advent of fulguration by the method of Bier much has been accomplished, providing the fulguration is begun at an early stage and before the growth has involved the bladder wall to the extent of producing much infiltration. In these cases fulguration does more harm than good, but in the incipient stage I have a collection of cases where the results have been surprisingly good and from three to five years afterwards there has been no further development of the growth. Of course these cases were not clearly proven to be cancer in the beginning.

The main question, however, that I want to bring out is the question of radium therapy in prostatic cancer. Personally, I have had very limited experience for the reason that it has been very hard to get a radium needle. But I have spent several weeks off and on investigating the results of the treatment of cancer of the prostate in Chicago and in Baltimore, and the results were surprisingly good—with this proviso, when there is a proper method of using radium therapy, at least in prostatic cancer. Prostatic cancer is a condition which, as Dr. Fischel says, lasts longer and pains worse than any other form. Metastases from prostatic cancer arise more seldom than in any other form. In radium therapy the old method of introducing the needle through the perineum or urethra into the bladder is to be entirely disregarded. The results have not been satisfactory. But in Baltimore and Chicago preliminary cystotomy for the purpose of introducing the needle directly into the prostate has been followed by surprisingly good results. On two occasions I saw it introduced and on reexamining the case it was impossible to see any enlargement or any proof of a preexisting nodule. Unless the radium needles are introduced properly, however, there will not be satisfactory results.

DR. W. T. COUGHLIN, St. Louis: It is far more than well worth while to have come here to hear this symposium on cancer this morning. Although the papers dealt mainly with cancer of the face and about the head and neck, I think we have all learned a lesson in regard to the necessity of early diagnosis of cancer. It was stated by one of the essayists that patients who had cancer of the mouth generally knew of the condition. I have in mind two cases, one is at present in the City Hospital, who presented himself with an enormous, inoperable mass on the side of the neck. This man had passed through three institutions in St. Louis and finally landed at the City Hospital, where we quite agree with the others that it is an inoperable case. The man says he has never had anything the matter with his mouth. It is an astonishing fact, however, that in the back part of his mouth on the left side, the same side as his growth, he has a cancer 1 inch in width and 1.5 inch in length. It is also astonishing that we could dig out of that hole as much necrotic material as would fill a tablespoon. No pain at all.

The other case is one that perhaps one of the essayists will remember since he gave a deep alcohol injection in that case for the relief of trigeminal neuralgia. The patient had passed through the hands of several men and his cancer of the mouth was unrecognized. It was in the sulcus between the tonsil and the tongue, the site of many cancers, where of all places in the mouth cavity it is most likely to be overlooked. Any patient that complains of pain anywhere around the side of his head should certainly have that sulcus investigated. It was in that sulcus that the cancer mentioned in the first case seems to have had its origin.

The treatment with radium and roentgen ray, or the surgical treatment? There will always be some discussion as to which is the best method. Any operation that is incomplete will condemn that method

in the eye of the patient and in the eye of the practitioner that refers the patient, and the practitioner frequently and the patient always is unable to decide when proper therapy has been administered and whether it should be surgical or radiotherapy. To combine all three I think would probably meet the requirements, provided each of the three was administered only by those who are especially well qualified for such administration. Cancer of the breast or anywhere else treated with paste of course needs to be mentioned only to be condemned and I do not think it is necessary to mention it to an audience of this kind.

DR. ELLIS FISCHER, St. Louis: In answer to Dr. Griffith's questions in regard to the different rays of radium: it is the beta rays which are irritating to the skin. These rays can be screened off easily by a screen of silver, or brass, or lead, or other suitable substance.

As regards the type of tumor affected, the soft sarcomas, that is, those rich in cells, are the ones that are most affected by radium. These tumors clear up like magic. I have seen an enormous tumor probably arising from the tonsil, subside in two weeks' time so you could not tell the difference of one side of the face from the other.

Dr. Griffith spoke of cases of uterine carcinoma which showed toxic symptoms afterwards. That is a very pertinent observation because there is no question but that large doses of radium in this kind of case will produce toxic symptoms. I find that fever is a not infrequent manifestation following from the first day and lasting perhaps three days.

I do not believe that his patient had a complete necrosis of the uterus. It takes a tremendous amount of radium to cause complete necrosis of the tissue. Without screening, the beta rays will cause sloughing. In New York I saw a case in the Memorial Hospital where 1 gm. of radium had been applied to the abdominal wall; the nurse who had made the application got the applicator turned upside down and instead of having it 4 cm. distant it was right close to the skin; that caused a tremendous slough of the wall. But that was a whole gram of radium. I believe it would take about that much to cause complete necrosis of the uterus. We consider 100 mg. as the minimum for effective treatment of a malignant growth of any extent.

In regard to the needles mentioned by Dr. Scherck, the needles are to my mind the only rational way to use radium when you have a tumor mass. If you have an ulcer, a surface applicator; but if you have a tumor use needles because you can bring your radium in closest contact with your malignant tissue.

As to the advantage of radium over roentgen ray: in a circumscribed tumor mass, if you can get your remedial agent—radium—into that mass your chance of success is certainly greater than if you have to get it from a distance. That is the advantage of radium over roentgen ray. You make the tumor tissue itself act as a screen. It will not be followed by sloughing, and you have a rapid and in some cases complete, eradication of your tumor.

DR. L. A. MARTY, Kansas City: To my mind one of the pleasing things about this presentation is that you hear the subject discussed from the surgical standpoint, from the standpoint of roentgen ray and radium, and from all other lines of treatment, and yet they all agree. It shows the tendency is all in the same direction—to do whatever is best for the individual case. It is not a question of whether it is best by surgery or radium or what not. Of course the early recognition of these cases has been emphasized, but at the same time some men have shown the wonderful results obtained even in late cases, so we may draw the conclusion that no case is too early and no case is too late.

Another thing, we have cases referred once in a

while to get a "few light shots." That is the worst advice in the world. You do not want light shots; they are irritating. You want to hit them hard. Not all in one day, because if you do you kill your patient. There is a toxemia from the treatment, especially from the roentgen ray, and if you give too much you will kill the patient. Scatter it over a few days, but hit them hard.

DR. C. F. SHERWIN, St. Louis: I have not very much more to say in regard to the cautery than was exhibited by the slides this morning. But I do want to bring out one point, and that is that the early diagnosis of the lesions affords by far the greater chance of treating them not only with the cautery but with radium and other means. It is the duty of the general practitioner, the man who sees these cases first, to treat them properly if he knows how to do so, and if not send them to the men who do know before they get beyond control. More than 90 per cent. of the early cases have been apparently free from tumor by the use of the cautery; that is, the early cases that could have been taken care of and would have been taken care of under local anesthesia. While these horrible examples of brutal and extreme surgery are made necessary by the pleas of the patients that something be done for them, yet if the case has a chance at all 25 per cent. of that class that are treated with the bare possibility of help, have been free from their lesions at least for a short period of time. But the thing to remember is to make the diagnosis of these cases early, then the proper sort of treatment, whatever you use, will take care of the case without causing very much deformity. The cosmetic effect is good provided you get rid of the cancer. That is the essential thing.

## ORIGINAL ARTICLE

### TREATMENT OF SYPHILIS\*

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Since many complete books have been written on the treatment of syphilis, to attempt to cover the subject in a brief paper would be absurd. It is not my intention to relate case histories as proof of the efficacy of the treatment which I suggest, but to tell you briefly a routine which, if followed, will prove effective in a large number of cases of early syphilis and will often certainly ameliorate the symptoms in the late stages of the disease, even in general paralysis. No effort will be made to deal with exceptional individual cases and the treatment which will be suggested is intended to cover only the majority.

The importance of beginning treatment as soon as possible can not be too strongly emphasized; other factors being equal, the tissues are injured in proportion to the length of time the spirochetes are permitted to increase in them. With the hope of effecting an early cure it is essential that thorough treatment be begun at once, to eradicate these spirochetes. Realizing this necessity, it is important that any excoriation, papule, nodule, crack, "hair cut," herpetic

\* Read at the meeting of the Callaway County Medical Society, Fulton, Mo., Dec. 4, 1919.



or genital sore, should be looked on with great suspicion until it is proved conclusively that syphilis does not exist. Although time is a very important factor in the treatment of this condition, it is doubtful if any case should receive specific treatment until a positive diagnosis has been made, notwithstanding the grave danger of the dissemination of the *Spirochaetae pallida* throughout the body due to the waiting for a positive diagnosis. If a case is treated on suspicion, a patient may be subjected not only to unnecessary expense and a severe medical treatment, but also to the haunting fear for perhaps the rest of his life that he is a victim of syphilis.

It is unlikely that there is another chronic infection in which the outcome can be so easily calculated as in syphilis. Furthermore, there are few infections which react as quickly to treatment as syphilis in its early stage, one dose of arsphenamin often causing practically every outward symptom of the disease to vanish as snow before the sun. It is the duty of every physician to inform his patient in the beginning of the dangers which lurk behind the good signs which follow inadequate treatment.

Arsphenamin is the basic drug in the treatment of syphilis. Contraindications to its use are rare. The administration of the drug is by no means child's play—rigid asepsis must be observed throughout. If there is no fault in the technic the drug can be used with safety in practically all cases. However, when some acute febrile disease, or diseases of the liver, kidney or vascular system, is also present—if such is non-syphilitic in origin—arsphenamin should be given with caution. Care should also be exercised in its use in the treatment of syphilis of the nervous system. One or two doses only should never be given; for, as a result, more serious neurologic complications may light up. In the administration of arsphenamin there are three factors which perhaps cause more undesirable reactions than all others combined. These factors are, namely, (a) a solution too concentrated; (b) failure to neutralize the solution; (c) the use of old or imperfectly sterile, distilled water.

The use of mercury in the treatment of syphilis and the various ways in which it is administered is a matter of common knowledge. It is doubtful whether any case of syphilis can be cured without the use of mercury in some form. It will give almost the same results as arsphenamin but requires a longer period of time. Mercury should not be given by the mouth in the belief that much can be accomplished, but should be administered either by inunctions or intramuscular injections. Because of the uncertainty of securing proper administration by means of inunctions, in most cases outside of a hospital all mercury should be given by muscular injections.

Since the curative action of the insoluble

salts of mercury is greater than that of soluble, other things being equal, I have usually selected mercuric salicylate for intramuscular injections. In addition to the superior curative effect of the insoluble salts they are administered once each week, while the soluble are injected at least every other day. The soluble salts, however, have this advantage—they are free from the dangers of accumulative effects and therefore less dangerous to give than the insoluble.

Since there is no conclusive evidence that late syphilis can be cured it is essential, from the moment that a positive diagnosis is made, that intensive treatment should be begun and pushed with vigor. It is useless to give one or two doses of arsphenamin and a few injections of mercury and expect to effect a cure; for no sprinkling process will save the syphilitic victim—he must be immersed. The following method may have its defects but no one will accuse it of being a dry cleaning process: Four intravenous injections of arsphenamin of from 0.4 gm. to 0.6 gm. at intervals of seventy-two hours, followed by a month of insoluble mercury, then another course of arsphenamin, finally more mercury, then rest for a month. It will be observed that the time required for the foregoing is about four months. During the first year this course of treatment should be repeated three times. A Wassermann test should be made once each month during the first six months and once every two months from then until the eighteenth month. During the second year, if the Wassermann remains positive, the treatment should be the same as that during the first year. If the Wassermann is negative, two courses of mercury only should be given at intervals of four months. A patient should never be encouraged to feel that he is on safe ground until four negative Wassermans at intervals of six months have been obtained during which time no treatment at all has been administered.

The foregoing therapy is a routine which will answer in practically any case with the exception of syphilis of the nervous system. Even then some good may be accomplished. Mercurialized-arsphenaminized serum seems to offer the most hopeful outlook for the neurosyphilitic victim. But intraspinal treatment should be undertaken only by a person who has had some laboratory training.

"When is a patient cured?" is often heard. The answer is not easy. A few patients are cured with comparatively little effort, while others do not respond properly even to intensive and prolonged treatment. It is impossible to establish the absolute certainty of a cure. The safest rule is to follow that course which is in keeping with the ideas of the foremost syphilologists of the time. Each case is an individual problem and the possibility of a cure and the length of treatment which should be given depend largely on the extent to which the disease has progressed.

# THE JOURNAL

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## Missouri State Medical Association

JULY, 1920

### EDITORIALS

#### CANDIDATES FOR THE LEGISLATURE

Physicians should take an active interest in the primary elections in order that they may gain a fairly comprehensive foreknowledge of the manner in which their representatives in the state legislature will act on bills that affect the health of the people and the practice of medicine.

In emergencies, when the public health is endangered, whether in a county or throughout the state, as it was in the recent epidemic of influenza, the people expect physicians to cast aside all thought of personal and family considerations and throw themselves into the fight against the invisible enemy of health and life. And the medical profession has never refused to answer this call for help against a foe whose method of warring against human life is mysterious and dumbfounding to everyone except the physician—and sometimes even he is baffled. Into the fight physicians throw themselves with such utter disregard for their own safety that the toll of death among them often is a serious loss not only to the profession but also to the community; for it is not always an easy matter to fill the gap left by the loss of an upright physician skilled in the tactics of fighting disease. However, the disregard for his own safety is a characteristic not solely limited to members of the guild of the Esculapians. Others, whose special qualifications place them in position to guard life and property in times of peculiar peril, just as heedlessly sacrifice personal safety to the general good. The engineer sticks to his post when danger threatens his train, the ship's captain does not leave in the first lifeboat when his vessel is wrecked, the fireman rushed into the burning building heedless of flame, smoke and débris. But the state draws a distinction between the physician, the life saver, and the others, the property savers, by enacting very drastic laws for the protection and preservation of all forms of property, while the health and lives of the people are often left pretty much at the mercy of the people themselves. In making laws affect-

ing the public health the nonmedical representatives of the people too often mistake opinion for knowledge and write bills that are frequently ludicrous and sometimes dangerous. Every statute in Missouri safeguarding the health of the people has been enacted at the insistent demand of the reputable medical profession and nearly always despite violent opposition. On the other hand, the profession has steadfastly opposed bills that would lower the medical and health standards in our state. At the last session of the legislature we were compelled to stage a fight against a bill that should never have gotten out of committee—the bill to compel the state board of health to examine the graduates of “legally chartered” medical colleges instead of “reputable medical colleges,” as the law now reads. That battle should never have been necessary. The representatives of the people should have seen plainly that such a change would have been detrimental to the public good, but many of them could not or would not see it. It would have brought our medical standards, now high in the forty-eight states, down to the bottom of the list. A similar bill may be introduced in the next session of the legislature. If it is we must go through the same old fight, but we should dig a few trenches and lay a few foundations for our heavy artillery in preparation for the event.

These preparatory steps should be taken before the primaries because that is the most effective time to inquire whether the aspirants for office are willing to heed the advice and suggestions of the county medical societies on bills affecting the public health and the practice of medicine. Every sensible person running for office knows he cannot pass on such questions intelligently without consulting with reputable physicians and he is willing to be guided by their judgment. Unfortunately, not all office seekers or office holders can be classified as sensible, wise, or judicious persons. Personal prejudice and a biased viewpoint too often pass muster as sound judgment. Members of county societies can be very influential in the primaries and in the fall elections if they will study the previous record of candidates who are up for reelection and the probable attitude of those who are making their first race for the privilege of representing the people in the law-making body of the state.

Among the candidates this year are several physicians and all of them are upright men whose attainments entitle them to the confidence and support of the profession and the people.



Dr. Guy B. Mitchell of Taney County, a member of our Association, is a candidate for the Senate in the Nineteenth District and if he wins the nomination he will be elected, as the district is overwhelmingly Republican. Dr. Mitchell was a member of the House of Representatives in the last session and had charge of the bill sponsored by Governor Gardner to create a central board of control for the eleemosynary institutions. He handled this measure in masterly fashion, securing its passage in the House without a dissenting vote. He is forceful and thoroughly familiar with the work of the General Assembly, and a loyal member of our organization. Our members in his district should exert themselves to secure his nomination and give him all the assistance in their power to win the election. The district comprises the counties of Christian, Dallas, Douglas, Ozark, Polk, Stone, Taney, Webster. He has two opponents one of whom, Mr. P. A. Bennett of Buffalo, Dallas County, seems to be an adherent of the chiropractic faith, a statement that should be sufficiently descriptive of his attitude toward public health matters and medical standards to eliminate him so far as the medical profession is concerned. If Dr. Mitchell is elected he will be a strong factor in guiding health legislation into the right channels and will have the confidence and support of broadminded men in both branches of the General Assembly.

For state Senator from the Seventeenth District, Dr. B. B. Tout of Archie, Cass County, has filed for the nomination on the Republican ticket, and Mr. J. B. Hereford of Odessa, Lafayette County, is the Democratic candidate. Dr. Tout is a charter member of the Cass County Medical Society, who has faithfully upheld the tenets of reputable practice during the thirty-five years of his professional career and always cooperated fully with the county and state medical associations in supporting approved bills and opposing radical measures. The district is strongly Democratic but if Dr. Tout is elected he will guard the health interests of the people with justice and wisdom.

Mr. Hereford, the Democratic aspirant, is a gentleman whose training and affiliations will enable him to act with intelligent discrimination on all bills that affect the public health and the medical profession. At present he is a member of the board of managers of State Hospital No. 1 at Fulton.

Dr. W. S. Smith of Rolla, for many years secretary of the Phelps County Medical Society and strongly influential with the members of the legislature from his county, is a candidate

for Representative from Phelps County on the Democratic ticket. He has no opposition for this honor at present and since Phelps County is a Democratic stronghold his election may be confidently expected. As a member of the legislature he will prove a bulwark of defense against the passage of bills destructive of our high medical standards and will foster the enactment of laws to erect even greater safeguards than now exist for the protection of the health of the people.

Mercer County, strongly Republican, also offers a physician candidate for the House of Representatives who is not only a wise physician skilled in the art of healing, but a safe counsellor versed in the laws of preventing disease, Dr. George M. Bristow of Princeton. Forty-three years Dr. Bristow has spent in alleviating the ills of the country people of Missouri; three years in Macon County and forty years in Mercer County, where he is honored, revered and loved in every home. Possessing wisdom to discern the good from the bad in every circumstance, unselfish devotion to the interests of the people, and unswerving integrity in every step, Dr. Bristow will carry to the capital city those traits that enable lawmakers to discriminate good from bad bills. He is the Republican candidate, unopposed, and will without doubt be nominated and elected.

In Cass County the outlook seems rosy for the nomination of a Representative untainted with chiropractic virus, since the county always elects a Democrat, and the aspirant on that ticket, Mr. A. W. Wilhite, Mayor of Garden City, is reported to be a strong supporter of the regular medical profession. It was said that he signed a petition containing some three hundred names asking the county court to dismiss a suit against a chiropractor recently on the grounds, forsooth, that the trial was costing the county too much money! This is denied by Mr. Wilhite, who says that if he is elected to the lower house of the General Assembly he will be glad to do everything he can to advance the cause of the reputable medical profession of Missouri.

Dr. E. M. Roseberry of Neosho, Newton County, a member of our Association, is a candidate for Congress from the Fifteenth District on the Democratic ticket. Dr. Roseberry deserves the support of the medical profession of the district and if elected he will give a good account of himself in Congress. He is no stranger to legislative halls, having been elected twice to represent Newton County in the state legislature, in 1906 and again in 1908. Always

an ardent champion of the highest ideals in medicine and recognizing the need for advanced legislation in health matters, he was an able partner of the late Senator Allee in securing the passage of the vital statistics bill and defeating some exceedingly dangerous measures.

Closely connected with the medical profession but not himself a member of the guild, is Mr. Robert E. Lee Marrs of Carthage, a candidate for state auditor on the Democratic ticket. Mr. Marrs was secretary of the Senate in the last session of the General Assembly and for many years has been identified with the activities of the legislature. He has always manifested an attitude toward measures affecting the health of the people which entitles him to the fullest confidence of the medical profession.

If these candidates are elected we would be in far better position to guard our own interests and preserve the integrity of the present laws safeguarding the health of the people than has been possible since the death of our lamented member, Dr. Allee. For even a small force intrenched in the confidence of the people and armored with truth, wisdom and sincerity, may rout an enemy equipped with no better arms than selfish designs craftily concealed to deceive the unwary.

There may be physicians in other counties who are candidates for office, but we have learned of none except those mentioned.

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### THE NURSING SITUATION

The shortage of nurses—and this means pupil nurses in the training schools as well as graduate nurses in the field—is not a temporary problem. Neither should the solution of the matter be left for the nurses alone. The medical profession and the sanitarians are hampered in much constructive work by the lack of sufficient supplementary nursing effort. Is it not therefore their concern, for their own interests, to make persistent and intelligent efforts to find recruits for the nursing field? The physician is in very close touch with the public, that public which needs nursing and which must also furnish the material for the training schools.

Why are not the schools attracting a sufficient number of young women today? Because the young woman of today has been allowed to decide things for herself at a much earlier age than did the young woman of the past generation. She is a discriminating individual, and in selecting the profession for which she would prepare herself she asks: What will the training cost; what will it enable me to earn when

completed; where will it place me in society today; of what value will it make me in the world; is it the best use to which I can put these few years? And her parents, because she is quite young—often just out of high school—are asking many other questions: Just what is my daughter to learn in this work; how will she be treated in the routine of hospital life; who will guarantee to look after her physical and social welfare; under what living conditions shall she spend these few years; how many hours a day will she have to work? And too often the decision is made by both the daughter and parents against nursing training. It may be because the shades of Sairy Gamp still lurk about the hospitals. At least it can truthfully—and regretfully—still be said that the majority of our training schools are not primarily educational institutions. They still exist in most cases because it is the cheapest way of taking care of hospital patients.

It will cost money to change from the apprenticeship system to an educational system; but there are too many interesting and remunerative fields open to women today for the former system longer to attract desirable applicants.

If we would make the two or three years of training attractive we must make the student feel that the time in training is well spent. She will not be kept indefinitely at routine tasks that a person of much less intelligence can do quite as well. She will not be kept on duty until she is physically or mentally too fagged to study. She will no longer be expected to spend hours—and investigation has shown that even in our best hospitals it is more often days and weeks—cleaning instruments, mending gloves and folding gauze! Is this the education for which she is expected to pay tuition by eight hours work or more a day on the wards of the hospitals for three full years?

In another column<sup>1</sup> will be found a letter containing questions bearing on this whole subject. Answers to these questions will be used in an endeavor to help solve the problem of the shortage of nurses.

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### THE REAL FLORENCE NIGHTINGALE

When we visualize a trained nurse with our decidedly modern minds inured to the discipline which obtains, or should obtain, in all modern hospitals, and especially after a number of deep impressions have been made on our decidedly modern minds by well-meaning physi-

1. See page 289.



cians who, in their addresses to graduating nurses, invariably send them forth into the world with the mandate that it is their duty always to be cheerful, always gentle and lady-like, and never display the slightest ruffling of temper no matter what untoward circumstances confront them, we see before us an entrancing idealization of the trained nurse; and great is our joy that modern science has produced this paragon of all the virtues. That our experience teaches us that even nurses are human and quite often exhibit the failings of mankind, and especially are "afflicted" with exhibitions of temper in trying circumstances, does not entirely destroy the idealization of the trained nurse which we guard as if it were something sacred; and this is proved by the complete faith nearly all physicians have in the amiability of the nurse in the sick-room, no matter how recalcitrant the patient may be, and the nonbelief in many of the statements the patient may make as to the nurse's irascibility and indifference at times to her wants. With these thoughts in mind, it is refreshing to contemplate the life of a nurse who stood shoulders above the rank and file, and who, by means of her unusual talent, clothed the outcast—the art of nursing in mid-Victorian times—in habiliments of decency and durable cloth. Florence Nightingale, the centenary of whose birth has recently been celebrated in all English-speaking countries, did not by any means belong to the ranks of those amiable and sweet-tempered nurses who wander listlessly around in the sick-room, not so much for the sake of being the efficient "companions" to the patient, but to impress the attending physician with the "fragrance" of their enviable disposition. But she belonged to a better and not an easily-attained class—the men and women who by sheer indomitable will fight their way to the front, despite obstacles, despite criticism, despite the rancorous snarlings of little minds who invariably beset all pioneers with their obstructive methods in the hope of preventing an enviable goal from being reached.

During the centenary of this remarkable woman—we should say extraordinary on account of what will follow in this editorial—small mention was made—by those who addressed audiences—of the dynamic power of this worker in a virgin field, of her ungovernable temper, of her deep hatreds, and of her faculty to make those in her entourage so obedient to her will that they were mere puppets who never ceased doing her bidding. Sidney Herbert, a brilliant English statesman, soon

fell into her clutches as a tool of the highest service for her needs in reforming the antiquated methods in constructing army hospitals in England—this was after her return to England at the close of the Crimean War—and she "worked" Sidney Herbert day and night in her efforts to get Lord Pannure, her enemy, out of office as Secretary of State for War; Arthur Clough, the highly talented and sensitive poet, was bundle-boy—tied parcels and delivered them; and there were others of lesser note who made up what was known as the Florence Nightingale "Cabinet," which was always in opposition to the British Cabinet, and for very good reasons. With Sidney Herbert what Miss Nightingale said was law, and no man of his mental caliber in the whole history of the English race ever played "second" to man or woman as did this man. It was Miss Nightingale's voice that was heard through the medium of Sidney Herbert when he rose in Parliament to fight for a measure that was for the sanitary good of the whole army, or to fight against an asinine and antiquated measure that was persistently allowed by statesmen to lumber on from year to year despite its deleterious effect on the health of the army. And so unrelentingly did Miss Nightingale pursue Sidney Herbert on all occasions with advice, with suggestions and often with considerable ill-temper, in the hope that her "pet" ideas could be carried to a successful close, that his health gave way and death claimed him long before his end should have come. As Lytton Strachey says in his brilliant book of essays, "Eminent Victorians," illustrating her unquenchable desire to overwork everybody whom she knew and who could possibly be of any help to her:

Yet her conception of God was certainly not orthodox. She felt towards Him as she might have felt towards a glorified sanitary engineer; and in some of her speculations she seems hardly to distinguish between the Deity and the Drains. As one turns over these singular pages [Miss Nightingale had written a book entitled "Suggestions for Thought to the Searcher After Truth Among the Artisans of England"], one has the impression that Miss Nightingale has got the Almighty in her clutches, and that, if He is not careful, she will kill Him with overwork.

How much better it is to know Florence Nightingale as she really was and not as the sweet-voiced Longfellow pictured her. But it is hard to destroy what has been implanted and fixed in the minds of men and women; and no doubt what is known of the real Florence Nightingale today will have small effect in destroying the idealized picture thousands have

of the suavity and gentleness of the "Lady of the Lamp," conceived by the somewhat effeminate mind of Longfellow and passed on to the general public to wallow in so sympathetically and tearfully. But the case of Florence Nightingale is the case of every man and woman who makes his or her mark against heavy odds. And it is well that there are this kind in the world every now and then, for, by their presence and on account of their unusual mentality, they destroy those foolish, idealized pictures of men and women which are only too often gross caricatures that should be consigned to the limbo of complete forgetfulness.

### THE HYPERPITUITARISM OF OUR AMERICAN AUTHORS

If you are a close reader of the magazines which litter the shelves of our bookstands or the tables of our bookstores and libraries, you must have noted the number of short stories which our American authors are turning out by the yard each month, and you must have marveled at the amount of the output and the superficial cleverness of a great deal of the so-called literary work. Directly a "find" is made, that is, directly an author hits on a subject that is off the beaten path, a dozen imitators spring into existence who play the same tune with some slight variations. The tune may be very thin in the beginning but this does not dismay the imitators, for the dearth of subjects, to their way of thinking, is so alarming that they feel justified in pouncing on the tune and playing it on their own instruments. The result is that a certain manner is affected by dozens of authors, a manner that becomes characteristic of a whole brood of authors, and a manner that is never changed, be the subject whatever it may. Hence, the close reader of our magazines must have noted that no matter whether the scene of the short story is laid in Arizona, New York or Georgia, the "treatment" is the same, the characterizations are the same, and the "smartness" never varies from the standard as judged right and proper by the supposedly higher-class mentalities who have achieved some sort of reputation as weavers of popular short stories. Whence comes this imitative quality? Is it due to the desire of the publishers for the slightly changed story month after month, or is it due to the authors themselves, who really are doing their best to entertain the reading public but who are the victims of hyperpituitarism of the postadolescent type?

Let us take as an illustration of our contention that the majority of our American authors of short stories are afflicted with hyperpituitarism of the postadolescent type, the latest literary material of Miss Fannie Hurst as put forth in the *Cosmopolitan Magazine* under the name of "Star-Dust." This story by the way is a long one, but will nevertheless serve our purpose since it is in reality a number of short stories strung together on the mere thread of a plot. Here we have illustrated in no minor degree the salient features, mentally speaking, of hyperpituitarism of the postadolescent type. No mind but of the type which indicates abnormal development, decided temperamental tendencies, loquacity and unstableness, could have thought out and written the following sentences, which are a small illustration of many with which this author bestrews her story. Has there ever been even in the cheapest form of literature anything so unstable and loquacious as the opening paragraph of Chapter XI: "By a strange conspiracy of middle-class morality, which clothes the white nude of life in suggestive factory-made garments, and by her own sheer sappiness, which vitalized her, but with the sexlessness of the young tree, Lily, with all her rather puerile innocence left her, walked into her marriage like a blind Nydia, hands out and groping sensitively"; or as: "The St. Louis of Lily's little girlhood, sprung so thrivingly from the right bank of the Mississippi, and builded on the dead mounds of a dead past, was even then inexplicably turning its back to its fine river-frontage, stretching in the form of a great adolescent giant, prone, legs flung to the west and full of growing pains, arms outstretched and curving downward in a great north-and-south yawn"; or as: "Central High School, the city's only at a time when half a million souls beat up like a sea round it, a model and modern institution that was presently and paradoxically to become architectural paragon for what to avoid in future high-school buildings, was again within street-car distance, except on unusually bland days, when Lily and Flora Kemble would walk home through Vandeventer Place, the first of those short private thoroughfares of pretentious homes that were presently to run through the warp of the city like threads of gold"?

That hyperpituitarism of the postadolescent type should really be responsible for the balderdash with which the American public is "victimized" every month, throws the mantle of charity over the efforts of the authors; for by accept-



ing this theory the clouds are pushed aside, and light is allowed to penetrate a situation which has caused much dissatisfaction and much drastic criticism on the part of some of the readers of the magazines that specialize in stories which invariably show the chief mental characteristics of the hyperpituitaric—instability, loquacity, and a decided hypertrophy of the sort of temperament that leads to a complete disregard of the literary unities. In other words, the authors, hampered as they are by a pathologic condition, are really working against heavy odds and hence deserve our sympathy instead of our denunciation. That success—and in some instances great financial success—should follow close at their heels does not indicate that their work has any enduring qualities, but merely the desire of a nondiscriminating public to encourage the antics of literary clowns, just as a nondiscriminating crowd rushes to the circus and foregatherers in the tents set apart for monstrosities for the sake of viewing “the greatest and most wonderful freak.”

The monthly loquacious exhibitions of our literary hyperpituitarics in our many magazines are a chapter in our social development which indicates that the American people are losing complete sight of normal mentality. That we as a nation have never been the equal of the English or the French in a literary sense is a matter that needs no comment here; but even lacking the literary sense that can ferret out at once what is good from what is bad in literature, what, may we ask, has become of our sense of humor? And what has become of our dogged persistence, so noteworthy in the past, to get the best return for our money? And last but not least, what has become of the “Great American Characteristic” of “getting there” by the shortest route on account of our hereditary impatience to waste time? Surely, page after page of vapid conversation that has absolutely nothing to do with the story itself, but is merely “introduced” to show the author’s pathologic state of verbomania and equally pathologic state of egoistic “smartness,” is not the sort of thoroughfare on which to travel to “get there”—to reach the goal in the shortest time possible. The French, generally considered “diseased” and degenerate by superficial American critics, would not only cry out against a redundant verbiage on the part of their own authors, but would start an inquiry into the sanity of the authors and the sanity of the publishers. And the French, be it said here, are masters of the short story—the short story of limited conversation, of repression, of half-

told incidents that stimulate the intelligent reader into thinking of those problems of life without which life would be a humdrum affair. But our native hyperpituitarics affect neither the half-told incident nor a limited phraseology; their pathologic condition is against such deep and indelible marks of degeneracy (?). Theirs is the bravura song of all those whose pituitary gland overfunctionates—words, words, falling over each other, phrases, phrases that have no connection, anything and everything that will blind the reader to the paucity of their thoughts. A meal of pastry insufflated to the bursting point—large, formidable, exciting, on account of its dimensions, but a fraud that only the abnormal workings of the pituitary gland is capable of effecting.

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#### NEW TREATMENT FOR LEPROSY APPARENTLY SUCCESSFUL

For some years the belief has been gaining ground that leprosy could be cured and encouraging progress was made by several investigators. The starting point for this study was the observation that now and then the course of the disease appeared to be favorably influenced by treatment with chaulmoogra oil. The treatment, however, was attended with many difficulties and could not be carried out in all cases. At this point the U. S. Public Health Service enlisted the cooperation of Prof. L. E. Dean, head of the chemical department of the College of Hawaii and president of that institution, suggesting that attempts be made either to isolate the active constituent of this drug or to devise means for making its continued administration feasible. The latter has been accomplished by preparing what is known as an “ethyl ester” from the chaulmoogra oil. The treatment has been carried on at the Leprosy Investigation Station at Kalihi, Hawaii, the work being directed by Dr. J. T. McDonald, director of the station. The results of the treatment thus far have been so satisfactory that lepers come willingly for treatment, a recent inspection by Hawaiian health authorities failing to disclose a single secreted case of leprosy. Following a course of treatment extending over about a year, forty-eight lepers treated according to the new method were paroled in October, 1919. Up to now they have remained free from disease. At the present time the treatment has been administered only at the receiving station but it is hoped to provide facilities for the treating also of lepers in the leper colony at Molokai.

Thus, one of the world's most dreaded maladies regarded as a hopeless and incurable scourge of humanity since early history, would seem to have been conquered by officers of the Public Health Service in the leper colony in the Hawaiian Islands.

The announcement relates to lepers who have been treated by the new method and have been under observation for a considerable period. The decision as to apparent cure has, in the case of each patient, been officially determined, not by officers of the Public Health Service but by a special parole board which alone has authority to discharge a patient from custody.

The Public Health Service is now conducting a very careful study of the treatment, making detailed records of all the cases and taking photographs of the lesions once a month. Details concerning the treatment will be published in the near future.

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## BOOKS FOR LEISURE MOMENTS

*Reading with discrimination broadens the mind  
and strengthens the mental grasp*

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IN Dr. James E. Kelly's "The High Road to Health" (Dodd, Mead and Company, New York), there are chapters of interest on the proper conduct of one's diet, exercise, and one's complete manner of living. The author gives detailed accounts of his ideas as to the advantages of remaining on "the high road" and the disadvantages of wandering into by-paths, no matter how alluring they are and how much easier they are to travel. Like all authors who write on this perennially green subject, Dr. Kelly takes it for granted that the majority of men have at their command many leisure moments in which to follow the many instructions laid down, especially the multiplicity of instructions pertaining to self-massage. The ordinary run of business or professional men have a decidedly complex life to lead: their interests in their offices are daily complicated enough to demand a considerable number of hours. Besides business tasks there are other tasks to perform daily—tasks which, if neglected, work decidedly against the welfare, materially speaking, of the being. This is the case always during health; and since Dr. Kelly's book is only for the healthy man and not for the invalid, it strikes the reviewer as being an altogether too strenuous interpretation of the methods one should pursue to keep oneself fit. Nevertheless, the book before us contains much that is commendable; and if the reader will single out the

chapter which really pertains to his own "indiscretion" and rectify it according to the author's rules, he no doubt will be benefited. But if he is ambitious enough to follow nearly all the instructions he will soon find out that his office interests will be neglected and his "business career" considerably interfered with on account of the time spent at home going through the various exercises to improve his muscles, lessen the rotundity of his abdomen, and the complicated practices in connection with self-massage, including manipulations to "better" his scalp, forehead, eyelids, ears, nose, neck, arms, chest, back, etc. Judgment in the selection of the "exercise" one needs is absolutely necessary—and who is "gifted" in this wise?—else so much time will be consumed in the making of one's "toilet" that one will be in a position of the young woman who wrote a long letter in London *Punch* some years ago in which she detailed "acts" similar to Dr. Kelly's instructions and which she began at 8 in the morning and did not finish until 4 in the afternoon!

P. S.

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IN Edith Wharton's "French Ways and Their Meaning" (D. Appleton and Company, New York) the reader will find a clever interpretation of the French people, a summation of those characteristics which our supineness has always led us into misconstruing. The cheap "boulevard" novel, the cheap sensational play heralded by our native, wily theatrical managers as the latest sensation in Paris, the inborn feeling in all Anglo-Saxons that they are superior to all other nations, especially the French, as regards morals—this feeling will always abide with us on account of the remains of a gloomy puritanism that blinds us to our own faults and narrows our mental horizon—are responsible for our distorted opinion of the French; and when this is remembered in connection with our superficial manner of judging matters without the trouble of calling into play the beneficent and very helpful hints which result from culture it can readily be understood why we so often miss out in understanding the French and so quickly form conclusions which must label us as very excellent expositors of the art of nonsense. Edith Wharton, unlike the typical American who spends two weeks in Paris and writes home exceedingly vacuous letters brimful of his observations of French characteristics, is a woman of deep intelligence and a writer who has won her spurs on account of her analytic studies of character, both American and French, as evidenced in her short stories



and her novels. Moreover, she has lived long enough in France to know the French people and to appreciate their point of view and, what is best of all, she divests herself completely of her native born prejudices and metamorphoses herself as much as possible into the sort of cosmopolitan who realizes that to understand a people it is absolutely necessary to study their viewpoint, use the viewpoint then as a premise, and on this solid foundation build the structure which shall show those less informed or rather ill informed, that the number of light rooms greatly outdistance the dark rooms. And on account of the good qualities of this brief document on behalf of a proper understanding of the French nation, and also because of its high purport to bring before the detractors of France—their number is very large and even intelligent physicians, who should know better, are given to making unjust statements—we would recommend this book to the entire medical profession as a preliminary study of a nation that has been traduced almost daily by the ready tongue of the prurient critic and the heavy tongue of the dyed-in-the-wool Pharisee. P. S.

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THE number of war-books is very large indeed, and many a reader has been badly bitten by being induced to buy a certain volume through enthusiastic praise in the daily press, or in a first class literary weekly or monthly, only to find out when he reads the book that he has been cruelly deceived. But every now and then a war-book is issued from the press that need not hide its head in shame because of inferior qualities, or need not feel abashed lest it feels that it is put forth to inveigle a gullible public into spending its money foolishly. Such a book is the not widely advertised and, we take it, the not widely read "A Physician in France," by Major-General Sir Wilmot Herringham (Longmans, Green and Company, New York). The author was Consulting Surgeon to the Forces Overseas, hence his opportunities to study the conditions as they prevailed in the hospitals in France during the Great War were many and varied; and that he availed himself of all his opportunities is evident throughout his book. But besides the opportunities for study, for classification, and for a final criticism as they presented themselves daily, due to considerable mismanagement in the beginning and never lacking because of a later more harmonious working organization, Sir Wilmot really *lived* in France, that is, during the years spent in arduous work with the British army he shook

off his insular manner of judging a foreign nation and succeeded in bringing himself directly opposite French ways and French customs openmindedly and with a most intelligent appreciation of their ways and wherefores. And because he was that sort of man his book is out of the ordinary—in fact, it is not a war-book in the usual sense of that term, but a social history of the French people written by one who succeeded in getting under the skin of that much misunderstood nation. The whole atmosphere of the book is engaging; the point of view, the sense of justness, the full appreciation of humaneness and sympathy. Here are no martial song sung in strident tones; no trumpet-like sounds declaring self-conceit; no egoistic judgments of men and things that happen to be foreign. Just a narrative of high lights and of a few low lights, told by a cultured Englishman in a conversational style without any attempt at making literature either by saying what is "smart" or unconventional, or by striving to "create" a literary style which might attract the attention of those readers who are forever talking about "style." A modest performance is this book, but what a splendid achievement! No "thin" pages written just to fill space and no multiplicity of the word "I." On the other hand, each page is filled with bits of "news" of all sorts, observations of deep acuity, and a charming philosophy that lulls the reader into a frame of mind which makes him think the better of all mankind. Alongside the usual war-book, and even alongside the ones which have been accepted as unusual, this well-written account of the medical side of the Great War as it obtained in France stands out most distinctly on account of its invariable regard for the best qualities in man. P. S.

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WHEN reading "The Old Humanities and the New Science," by the late Sir William Osler (Houghton, Mifflin Company, Boston and New York), one is struck with the sanity of the book and the literary charm of the writer. Unlike the dryasdust professor of Greek or Latin, who thinks that a complete knowledge of the roots of verbs, whether Greek or Latin, is absolutely necessary for the modern student, otherwise he cannot possibly be considered "educated," the author realizes the limitations of the professional knowledge of either language today—no narrow limitations are emphasized—and on this account, is most enthusiastic for the sort of knowledge of both languages which shall give to the student something much better than what

is usually taught in our universities—languages as an expression of the customs and mental trend of the people who spoke them. By assuming this attitude toward the old humanities the author galvanizes the dead languages into something very much alive and vibrant, and shows the advantage of a knowledge of them to every student on account of the unbroken links across the ages between ancient and modern times, especially when the link or links are of the scientific sort which apply to medicine. In connection with this classical essay by Osler, it would be well for all readers to read carefully "The Classics and Classical Humbug," by E. R. Dodds, reprinted from the *Irish Statesman* in *The Living Age* for June 5, 1920. In Dodds' essay we have Osler's thought expressed in the language of today—openly and with extreme candor, without the slightest trace of having been written in a mildewed library with only the Classics ranged on the shelves—and we get a clear conception of the war that is raging in all universities between the teaching of the old humanities and modern scientific instruction. Osler's essay has the dignity and the restraint of the well-read man who never detaches himself in his writings from what books have taught him, and Dodds' essay is the sort that a man of a facile and clever pen would indite in the open with sunshine streaming into his study and no Classics on the shelves to influence the modernity of his thought. Both are well worth reading, and have points of excellence which throw light on this much discussed subject. Moreover, both are, in their appeal, just as important to the teacher as to the student.

P. S.

No doubt you have often thought that the modern child, as guided by your advice and your example, has been instructed in the right sort of way and is very fortunate indeed to have the privilege of enjoying the benefits which you so willingly shower on him. But quite often your advice and your example are the opposite of what would benefit the child, not because you are a martinet of the darkest dye or a mild disciplinarian, but because you are thrusting on a growing mentality thoughts that are mature. In other words, you forget that the major part of your knowledge was acquired through close observation and study, and that it is an "unnatural" acquisition altogether unsuited to the "natural" child. You are a finished product—your thoughts are fixed and unwavering—your very manliness depends on their sta-

bility and their fixedness. That you are "unnatural" and the child is "natural" is well illustrated in Dr. Courtenay Dunn's "The Natural History of the Child" (John Lane Company, New York) and is illustrated without rancor and without prejudice. Here is no diatribe like Ellen Key's "The Century of the Child," with fulminations against fathers and mothers, or anything similar to those foolish and vapid books which sing the dismal song of the right of the child to be well born, but a complete history of the child from earliest times down to the present, showing the various attitudes of the "superiors" towards the "inferiors." And as was said above, this is done without rancor and without prejudice, but in so gentle and refined a manner that the reader reads along without being at all disturbed by that "personal note" which at times can be made so decidedly objectionable in books when thrust too often and too vehemently on the reader. And the best grace of all which this book possesses is its sense of humor—again of the quiet and gentle sort. A fascinating book is this for parents and for those who are not parents—untainted by pessimism and hopelessness. A cheerful book of high hopes and engaging optimism, set forth in simple language and possessing qualities which endear the author to the reader at once.

P. S.

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## NEWS NOTES

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DR. GEORGE M. BOTELER of St. Joseph has been appointed city health officer of that city to succeed Dr. H. DeLamater, resigned.

DR. J. F. CHANDLER of Oregon, secretary of the Holt County Medical Society and Deputy Commissioner of Health, has been appointed health officer of Oregon.

SCOTT COUNTY MEDICAL SOCIETY has adopted a new fee bill that went into effect June 1. The minimum fee for life insurance examinations for other than fraternal societies is \$5.

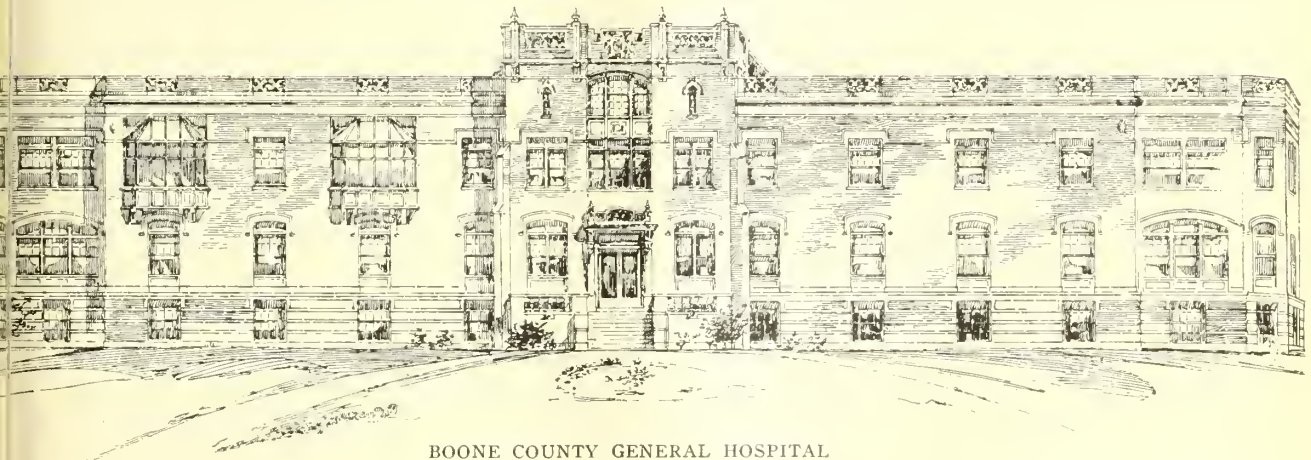
WASHINGTON UNIVERSITY has been given \$1,320,000 by the Rockefeller Foundation contingent on the medical school raising \$350,000, for increasing salaries and meeting the increased cost in other directions.



ON May 16 ground was broken for the Boone County Hospital at Columbia. Dr. A. W. McAlester, the oldest physician in the county, threw the first spadeful of dirt and Dr. W. R. Smith, the second oldest physician in the county, drove the first stake. Dr. A. R. McComas presided at the exercises, which included addresses by prominent citizens of the county interested in providing a modern institution where the people may obtain adequate hospital care. Two elections were held on the proposition to issue bonds for the erection of the building, the amount authorized in the first vote proving insufficient to pay for the cost of construction. It is thought the total sum voted, \$175,000, will give the county an institution that will serve as a model for similar buildings in other coun-

and leave his ordinary clothes there, then put on his smallpox clothes and visit his patients. Next, he would cut a hole in the ice in a nearby pond, get a tubful of water and take a bath. He would leave his smallpox clothes on one side of the building, cross over and put on his city clothes, and neither he nor anyone would see the patient till the next day."

WASHINGTON UNIVERSITY has increased the salaries of teachers 35 per cent. beginning with September, the increase to apply to all teachers whose salary has been \$4,000 or less. The University has paid bonuses during the past two years amounting to from 10 to 20 per cent. of such salaries.



BOONE COUNTY GENERAL HOSPITAL

ties. The site selected is one of the most beautiful spots in Columbia, situated on the Old Trail's Road about five blocks from the business center, consisting of 4 acres with many native forest trees and an old residence that will be remodeled for a nurses' home. Contrasting present-day methods of treating contagious diseases with those in vogue before and during the Civil War, a member of the board of trustees spoke of the work of the late Dr. W. T. Lenoir, who treated some Federal soldiers sick with smallpox during the Civil War. "There was a room on the fair grounds," said the speaker, "known as the ladies' rest room, which was hastily converted into a sick room, and the soldiers were taken there. Dr. Lenoir was assigned to care for them, and visited them once every day. It was in midwinter, and the only place that he could use as a dressing room was floral hall, which was two or three times as large as any barn in the county and about as cold as a barn. He would undress in floral hall

THE St. Louis University conferred the honorary degree of LL.D. on Dr. E. P. Lyon of Minneapolis, dean of the Medical School of the University of Minnesota and formerly dean of the St. Louis University. Dr. Lyon delivered the commencement address at the one hundred and first annual commencement of the St. Louis University, June 7.

DR. SAMUEL RANDLE of East St. Louis, Ill., was forced to disgorge \$925 recently when John Lincoln of Christopher, Ill., brought suit against him, alleging that Randle had worked a confidence game on him. Randle, it is said, guaranteed to cure Lincoln's daughter of paralysis, and Lincoln paid the money, of course in advance. When the daughter failed to grow better Lincoln figured that he had been hoodwinked, and brought suit to recover his money. The case against the physician was dismissed when Randle returned the money and paid the court costs.

DR. NATHANIEL ALLISON has been appointed dean of the Medical School of Washington University to succeed Dr. G. Canby Robinson, recently elected dean of the Medical School of Vanderbilt University, Nashville, Tenn. Dr. Allison is a graduate of the Harvard Medical School and has limited his practice to orthopedic surgery. During the Great War he gave all his energies to the medical service of the army where he earned marked distinction in his specialty. He has recently returned from Rome, where he was sent by the United States government as the American representative at the International Congress of Surgery.

At the annual meeting of The Western Electro-Therapeutic Association in Kansas City, May 27-28, the following officers were elected: President, Dr. B. B. Grover, Colorado Springs, reelected; first vice president, Dr. S. Grover Burnett, Kansas City; second vice president, Dr. H. W. Nye, Osborne, Kan.; treasurer, Dr. Charles Keown, Independence, Mo., reelected; secretary, Dr. Charles Wood Fassett, Kansas City, three years; registrar, Dr. E. A. Nelson, Phillipsburg, Kan., reelected; trustees, two years, Dr. W. P. Patterson, Springfield, Mo., and Dr. O. U. Need, Oak Hill, Kan., reelected. The constitution and by-laws were amended to conform to the requirements of the American Medical Association. The next meeting will be held in Kansas City in May, 1921.

EIGHTY-ONE per cent. of the school children in Greene County, including the city of Springfield, are defective, according to a report compiled for the Greene County Health Association by Dr. G. D. Gallaway, health director of Springfield. The report shows 6,593 school children were examined and 5,398 were found handicapped by physical defects that in large measure could be removed or alleviated. The defects were classified as follows: defective hearing, 151, or 2.3 per cent.; defective vision, 652, or 9.9 per cent.; defective teeth, 4,061, or 61.6 per cent.; diseased or enlarged tonsils, 2,896, or 43.9 per cent.; adenoids or mouth breathing, 1,753, or 26.6 per cent.; skin diseases, 194, or 2.9 per cent.; constitutional diseases, 303, or 4.6 per cent.; deformities, 241, or 3.6 per cent.

## MEMBERSHIP CHANGES, JUNE

### NEW MEMBERS

Cordrey, Henry L., Chaffee.  
Cox, John L., Fortescue.  
Ellis, Ralph V., 4246 Arsenal St., St. Louis.  
Finnegan, William L., Poplar Bluff.  
Gammon, William E., Louisburg.  
Goldman, A. Milton, 736 Reserve Bank Bldg., Kansas City.  
Henrickson, Hardin M., Poplar Bluff.  
Johnson, Edgar W., 924 Rialto Bldg., Kansas City.  
Meyer, Claude B., Buffalo.  
Spencer, Frederick B., 4101a Laclede Ave., St. Louis.

### CHANGES OF ADDRESS

Barnet, A. D., Guilford, to Fergus, Ontario, Canada.  
Butler, Thomas B., 235 Frisco Bldg., St. Louis, to 957 Arcade Bldg.  
Cale, George W., Jr., 4960 Laclede Ave., St. Louis, to Wall Bldg.  
Crapp, L. H., Wall Bldg., St. Louis, to 3129 N. Grand Ave.  
Dunaway, Jane E., Stanchfield, Minn., to El Dorado Springs, Mo.  
Epstein, Meyer J., Wall Bldg., St. Louis, to 722 Victoria Bldg.  
Farris, W. W., 4885 Natural Bridge, St. Louis, to 3505 N. Grand Ave.  
Elder, John T., Lamonte, to Syracuse.  
Funkhouser, Paul, Frisco Hospital, St. Louis, to 4354 Olive St.  
Hatcher, E. D., Springfield, to Glenwood Sanitarium, Kirkwood.  
Heryford, J. R., Maryville, Mo., to Highland, Kan.  
Hume, E. L., New Bloomfield, to Milroy, Ind.  
James, Edwin F., 445½ E. Commercial St., Springfield, to 628 Woodruff Bldg.  
Kane, R. Emmet, 312 Humboldt Bldg., St. Louis, to 1117 N. Grand Ave.  
Kelly, Charles A., 3900 Folsom Ave., St. Louis, to 3900a Park Ave.  
Milligan, R. H., Kearney, to 317 A De Baliviere Ave., St. Louis.  
Osborne, George, Lonejack, to Box 342, Mound City.  
Owens, Roy J., Leeper, to Mill Spring.  
Parker, J. H., Lapeer, Mich., to Steelville, Mo.  
Philips, Benjamin L., Drexel, to Paola, Kan.  
Salyer, Charles E., Shelbyville, to Hannibal Trust Bldg., Hannibal.



Stone, Murray C., 1107 Bardell St., Springfield, to 1107 E. Harrison St.

Striegel, B. F., Alexian Brothers Hosp., St. Louis, to 1637 N. 19th St.

Thomas, Arthur W., Frisco Hosp., Springfield, to 820 Landers Bldg.

Walter, David J., 1201 N. Taylor, St. Louis, to Caruthersville.

Weitz, George J., Boonville, to 118 Main St., Belleville, Ill.

Williams, George, Odessa, to 639 N. Union, Independence.

Wittwer, Hugh J., 4123 S. Compton, St. Louis, to 1924a N. Grand Ave.

Wyer, H. G., Kirkwood, to 5463 Maple Ave, St. Louis.

#### DECEASED

Coleman, Henry B., Kansas City.

Forster, Otto E., St. Louis.

Mairs, William J., Newtown.

Swearingen, William A., Dawson Springs, Ky.

### OBITUARY

#### OTTO E. FORSTER, M.D.

Dr. Otto E. Forster of St. Louis, a graduate of the Washington University Medical School, 1881, died at the Barnes Hospital, St. Louis, May 17, 1920, of heart disease, aged 61 years. After practicing in St. Louis for twenty-five years, during which time he specialized in diseases of nose, throat and ear, he retired from professional work and devoted his time to his property interests, which were large. He was a member of the St. Louis Board of Health for one term and also served a term on the St. Louis Board of Police Commissioners. He was a member of the St. Louis Medical Society and the State Medical Association.

### CORRESPONDENCE

#### TO SOLVE THE NURSING PROBLEM

St. Louis, Mo., June 16, 1920.

To the Editor:—The American Conference on Hospital Service appointed a Committee on Nursing at its meeting held March 3, 1920. The members of this committee present adopted a resolution to study the nursing problem as it exists both in the United States and Canada today.

A report is expected to be in the hands of the secretary of the committee one month prior to the meeting to be held Oct. 4, 1920, in Montreal.

This committee, of which I am a member, is very anxious to have an expression of opinion from the readers of the *Journal of the Missouri State Medical Association* on the following points:

1. Their opinion of the value of the three year course for nurses connected with hospitals; the two year course for nurses connected with hospitals; the high school prenursing courses; the Red Cross extension courses; short courses and correspondence courses.

2. Are the principles laid down in the nursing education in these courses right or wrong? If right, how can it be improved so as to adequately meet the nursing need? If wrong, how should the training of the nurses be made right?

3. What use are the graduates of these various schools making of this training? What misuse are the graduates of these schools making of their training?

4. What, if any, is the nurse wastage during training? What, if any, is the nurse wastage after finishing their course?

5. What are some of the reasons for the shortage of nurses today?

6. What suggestions can be made as to changes in the training, to make it efficient and not lower the nursing standards?

Letters should be addressed to me at the Barnes Hospital, 600 South Kingshighway, St. Louis.

Yours very truly,

L. H. BURLINGHAM, M.D.,  
Superintendent.

### SOCIETY PROCEEDINGS

#### COUNTY SOCIETY HONOR ROLL, 1920

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

- Webster County Medical Society, Dec. 1, 1919.
- Madison County Medical Society, Dec. 2, 1919.
- Livingston County Medical Society, Dec. 31, 1919.
- Schuyler County Medical Society, Jan. 9, 1920.
- Benton County Medical Society, Jan. 23, 1920.
- Camden County Medical Society, Jan. 28, 1920.
- Linn County Medical Society, Feb. 24, 1920.
- Ralls County Medical Society, March 8, 1920.
- Ste. Genevieve County Medical Society, March 17, 1920.
- Atchison County Medical Society, March 26, 1920.
- Chariton County Medical Society, April 6, 1920.
- Cass County Medical Society, April 7, 1920.
- Clinton County Medical Society, June 15, 1920.

## Missouri State Medical Association

Sixty-Third Annual Meeting, Held at Jefferson City,  
April 6, 7, 8, 1920

### MINUTES OF THE HOUSE OF DELEGATES

Senate Chamber

Tuesday, April 6, 1920—Morning Session

The House of Delegates of the Sixty-Third Annual Meeting was called to order at 9:30 a. m., April 6, 1920, in the Senate Chamber of the State Capitol, Jefferson City, by the president, Dr. N. P. Wood of Independence. At roll call the following officers and delegates responded:

#### OFFICERS

President, N. P. Wood, Independence.

Vice Presidents—

J. J. Gaines, Excelsior Springs.

W. A. Clark, Jefferson City.

J. C. Lyter, St. Louis.

Secretary and Editor, E. J. Goodwin, St. Louis.

Treasurer, J. Franklin Welch, Salisbury.

#### COUNCILORS

1st District, E. L. Crowson, Pickering.

2d District, O. C. Gebhart, St. Joseph.

4th District, J. B. Wright, Trenton.

5th District, J. R. Bridges, Kahoka.

6th District, P. F. Cole, Ewing.

9th District, A. R. McComas, Sturgeon.

10th District, D. A. Barnhart, Huntsville.

11th District, G. W. Hawkins, Salisbury.

12th District, Spence Redman, Platte City.

13th District, F. E. Murphy, Kansas City.

15th District, L. J. Schofield, Warrensburg.

17th District, W. J. Ferguson, Sedalia.

18th District, J. P. Burke, California.

19th District, S. V. Bedford, Jefferson City.

20th District, A. H. Hamel, St. Louis.

21st District, G. M. Rutledge, Ste. Genevieve.

22d District, H. L. Reid, Charleston.

23d District, J. H. Timberman, Marston.

25th District, O. A. Smith, Farmington.

26th District, W. H. Breuer, St. James.

27th District, J. C. B. Davis, Willow Springs.

#### COUNTY

#### DELEGATE

Audrain.....J. Frank Jolley, Mexico  
Bates.....R. E. Crabtree, Butler  
Buchanan.....H. S. Forgrave, St. Joseph  
Buchanan.....C. R. Woodson, St. Joseph  
Cape Girardeau.....G. W. Vinyard, Jackson  
Chariton.....J. Franklin Welch, Salisbury  
Clay.....Enoch H. Miller, Liberty  
Clinton.....J. T. Kinsey, Lathrop  
Cole.....H. G. Shobe, Jefferson City  
Crawford.....G. W. Reeves, Steelville  
Dent.....A. T. McMurtry, Salem  
Franklin.....W. C. Miller, Labadie  
Grundy.....Bertha E. Sheetz, Trenton  
Jackson.....Jabez N. Jackson, Kansas City  
Jackson.....Scott P. Child, Kansas City  
Jackson.....E. G. Mark, Kansas City  
Jackson.....R. H. Meade, Kansas City  
Jackson.....R. W. Holbrook, Kansas City  
Jackson.....P. V. Woolley, Kansas City  
Jasper.....A. B. Clark, Joplin  
Jefferson.....Charles E. Fallett, DeSoto  
Johnson.....James P. McCann, Warrensburg  
Laclede.....John W. Lindsay, Orla  
Lawrence-Stone.....H. L. Kerr, Crane  
Marion.....Thomas Chowning, Hannibal

New Madrid.....J. H. Timberman, Marston  
Newton.....H. L. Wilbur, Granby  
Pettis.....M. P. Shy, Sedalia  
Phelps.....W. S. Smith, Rolla  
Platte.....A. S. Herndon, Camden Point  
Pulaski.....E. A. Oliver, Richland  
Putnam.....Cyril P. Vores, Unionville  
Ralls.....T. J. Downing, New London  
Randolph.....F. L. McCormick, Moberly  
St. Charles.....J. M. Jenkins, St. Peters  
Ste. Genevieve.....G. M. Rutledge, Ste. Genevieve  
St. Louis.....G. C. Eggers, Clayton  
St. Louis City.....Francis L. Reder, St. Louis  
St. Louis City.....Harvey S. McKay, St. Louis  
St. Louis City.....I. W. Powell, St. Louis  
St. Louis City.....Robert M. Funkhouser, St. Louis  
St. Louis City.....R. S. Vitt, St. Louis  
St. Louis City.....C. E. Burford, St. Louis  
St. Louis City.....W. E. Holdenried, St. Louis  
St. Louis City.....Charles H. Neilson, St. Louis  
St. Louis City.....Elsworth S. Smith, St. Louis  
St. Louis City.....Emmett P. North, St. Louis  
St. Louis City.....Q. U. Newell, St. Louis  
St. Louis City.....J. C. Lyter, St. Louis  
Vernon.....T. B. M. Craig, Nevada  
Webster.....W. J. Rabenau, Fordland

The minutes of the sixty-second annual meeting, held at Excelsior Springs, May 26, 27, 28, 1919, were approved as printed in the JOURNAL.

The president, Dr. N. P. Wood, read his message as follows:

#### PRESIDENT'S MESSAGE

Since our last meeting there have arisen difficulties over which we had no control that have materially interfered with the work of the Association. The coal famine followed by the influenza epidemic prevented the activities of the various committees, particularly the executive committee of the council in their plans to hold postgraduate meetings in the various council or districts. However, there were four postgraduate meetings held. I had the pleasure of attending two of those meetings, both of which were well attended and had splendid programs. The meetings were as instructive as they were entertaining. It was my intention to attend a number of the county societies at their regular meetings but I was able to attend only two or three besides the postgraduate meetings.

I would recommend the continuation of these postgraduate meetings and would urge the establishment of rural hospitals in the various councilor districts. These would do much to create interest and efficiency in the county societies.

I also recommend the encouragement of and the cooperation with the state board of health and other organizations that are laboring for the enactment and the enforcement of better hygienic conditions in the state.

We should send more doctors to the legislature for I assure you that there is no class of men better qualified for legislative service than the doctors of this Association. I want to commend the various committees for their successful efforts in the legislature as we realize that they were conducted under great difficulties. I am glad to note the efficiency and prestige of the committee on health and public instruction as demonstrated by this committee and the one of last year, especially before the fiftieth general assembly when every measure they fought was defeated and those asked for were enacted. The work for the committee in the next general assembly which will convene before the next meeting of this Association will require vigilance and action.

It is a pleasure to know that our treasury has passed through the trying conditions that have prevailed the last two years and is in a satisfactory condition.



We are proud of our JOURNAL, which has appeared regularly with increased size and quality.

I want to thank the officers, councilors, and committees for their splendid work. You have done your part well in helping the Association onward and upward toward the goal of its loftiest purposes.

On motion the president's message was referred to the council.

The secretary read his report which was referred to the council. (See page 295.)

The treasurer read his report. It was moved and seconded that the report be referred to the council. Dr. C. R. Woodson of St. Joseph moved as an amendment that the motion read: "After thanking Dr. Welch for his excellent report, the treasurer's report be referred to the council." The amendment was accepted and the motion as amended was adopted. (See page 298.)

Dr. Funkhouser read the report of the Committee on Health and Public Instruction. On motion duly seconded and carried the report was referred to the council. (See page 296.)

Dr. Vitt read the report of the Committee on Defense which was referred to the council by motion seconded and carried in regular form. (See page 296.)

Dr. A. W. McAlester read the report of the Committee on Medical Education.

It was moved and seconded that the report be referred to the council with the recommendation that the report be published in monogram form and a copy sent to the county superintendent of schools in each county. Carried.

On motion Dr. F. G. Nifong of Columbia was granted the privilege of reading a communication appealing to the governor and the legislature to establish a state general hospital and complete medical education at the state university. On motion this communication was referred to the Committee on Health and Public Instruction with instruction to further the passage of any bill introduced in the legislature looking to the accomplishment of these objects. (See page 297.)

The president announced the nominating committee as follows: F. E. Murphy, Kansas City, Thirteenth District; J. F. Welch, Salisbury, Eleventh District; T. B. M. Craig, Nevada, Sixteenth District; C. R. Woodson, St. Joseph, Second District; A. B. Clark, Joplin, Twenty-Ninth District; W. S. Smith, Rolla, Twenty-Sixth District; E. H. Miller, Liberty, Twelfth District; H. L. Kerr, Crane, Twenty-Eighth District; J. C. Lyter, St. Louis, Twentieth District; J. H. Timberman, Marston, Twenty-Third District.

Dr. E. N. Chastain, Councilor of the Sixteenth District, submitted his resignation as councilor, which was read by the secretary. It was moved and seconded that the House of Delegates in accepting Dr. Chastain's resignation extend to him the thanks of the Association for his excellent services. Carried.

Dr. A. B. Clark moved that the Committee on Health and Public Instruction be instructed to hold a joint meeting with the board of curators of the state university to discuss the communication read by Dr. Nifong on a state general hospital and complete medical education at the state university. Seconded and carried.

The secretary read a letter from the secretary of the Arkansas State Medical Association inviting our members to attend its annual session. The letter follows:

LITTLE ROCK, March 31, 1920.

DR. E. J. GOODWIN, Secretary-Editor,  
Missouri State Medical Association,  
St. Louis, Mo.

Dear Dr. Goodwin:—We wish through you to extend to our many friends in the Missouri State Medical Association a cordial invitation to attend our annual session at Eureka Springs, June 8, 9, 10. The

meeting promises to be a very interesting one and we shall appreciate having our friends with us for the purpose of renewing old acquaintances and to help us make our session attractive and mutually agreeable.

Fraternally yours,

W. R. BATHURST,

Secretary-Editor.

On motion adjourned until 3 p. m.

### Afternoon Session

In the absence of the president and vice presidents Dr. R. M. Funkhouser was elected to take the chair. Dr. Funkhouser called the meeting to order at 3:20 p. m.

The report of the council was read by the chairman, Dr. A. R. McComas as follows:

### REPORT OF THE COUNCIL

The executive committee of the council held two meetings since the last annual session. On June 26, 1919, a charter was issued to the Dallas County Medical Society which was organized the previous year but no charter issued. The president announced the names of members of committees all of which were approved by the executive committee, and the executive committee reappointed the publication committee, consisting of Drs. Breuer, Child, and Bliss.

The other meeting was held on March 17, 1920. A request from the St. Louis Medical Society for enrollment of Dr. Montague M. Meyers as an active member without payment of dues on account of being permanently incapacitated, was granted as the application fulfilled all the requirements of the new by-law applying to such cases. Dr. Schlueter, chairman of the Defense Committee, asked the advice of the executive committee concerning a contribution to assist Dr. Daniel Hochdoerfer of St. Louis in a malpractice suit. Dr. Schlueter stated that Dr. Hochdoerfer, through a probable misunderstanding on his part, had not made application to the committee in regular form and the suit was several years old when it finally came to the committee's attention. The committee advised Dr. Schlueter to bring the matter before the council at this meeting.

The secretary reported that a check for \$69 for dues of members of Cass County Medical Society had been returned unpaid because the bank was in the hands of a receiver. Before this notice reached the secretary the certificates of membership had been issued. The committee advised holding the check pending payment of the amount or such portion of it as might finally be collectible. The action of the executive committee was indorsed by the council.

The Council recommends that county societies pay the state assessment for 1919 for those members who were in service that year and have not yet paid their dues.

The secretary of the state board of health requested the cooperation of the Association in placing on the ballot a proposition to levy a tax of one-half mill for public health work. The executive committee took no action but referred the matter to the council.

The action of the Jackson County Medical Society in expelling Dr. B. Clark Hyde was sustained by the Circuit Court and Dr. Hyde has appealed to the Court of Appeals.

No question of moment concerning the conduct of members or of the county societies has come to the attention of the committee and in other respects the work of the Association is progressing satisfactorily.

The postgraduate meetings were inaugurated on Oct. 10, 1919, the first meeting being held in the Twelfth District at Excelsior Springs. Other meetings were held in Columbia, Rolla, Moberly, Cape Girardeau and Springfield. Meetings were prepared for Chillicothe and Mexico but the coal strike prevented the sessions.

We recommend that \$1,000 be passed to the sinking fund, and \$1,000 to the defense fund.

Dr. Jabez N. Jackson moved that the recommendation of the council to transfer \$1,000 to the defense fund and \$1,000 to the sinking fund be approved. Seconded and carried.

Dr. C. R. Woodson moved that the action of the council in regard to the check from the Cass County Medical Society which was uncollectible on account of bank failure, be approved. Seconded and carried.

Dr. A. H. Hamel moved that \$100 be paid to Dr. D. F. Hochdoerfer of St. Louis toward defraying his expenses in the malpractice suit against him. Seconded and carried.

Dr. J. N. Jackson moved that the House of Delegates approve the proposition of the state board of health to obtain an amendment to the state constitution to levy a tax of one-half mill for public health. Seconded and carried.

The recommendation of the council concerning the payment of dues for 1919 of members who were in the service in that year and who had not yet paid their dues, was approved by motion duly seconded and carried.

On motion regularly seconded and carried, the continuation of the postgraduate meetings was approved.

Dr. Jackson moved that the report as a whole be adopted. Seconded and carried.

The secretary read a letter from W. Mortimer Clark asking the Association to indorse the movement to ask Congress to make the metric system the official system of weights and measures.

Dr. Hamel moved that the House of Delegates approve this movement. Seconded and carried, Dr. W. H. Breuer requesting that he be recorded as voting against the motion.

The selection of the next place of meeting being the next order of business, Jefferson City was placed in nomination.

The secretary read a letter from the Commercial Club of St. Joseph inviting the Association to meet in St. Joseph.

Dr. C. R. Woodson, on behalf of St. Joseph, invited the Association to meet in St. Joseph.

The ballot was cast, Jefferson City receiving thirteen votes, St. Joseph twenty-one, and St. Joseph was declared chosen as the place of meeting for 1921.

Dr. C. E. Burford moved that the Association pay the expenses of the delegates to the American Medical Association. The motion was regularly seconded but lost.

On motion, adjourned to Wednesday, April 7, 2 p. m.

### Wednesday, April 7

The House of Delegates was called to order at 11:30 a. m. by the president, Dr. N. P. Wood.

On motion the roll call and the reading of the minutes of the previous sessions were dispensed with.

The nominating committee not being ready to report the election of president was taken up.

Dr. R. M. Funkhouser nominated Dr. W. J. Ferguson of Sedalia for president. The nomination was seconded.

Dr. F. W. Burke moved that the nominations be closed and that Dr. Ferguson be declared elected by acclamation. Seconded and carried.

The report of the nominating committee was read by Dr. Franklin E. Murphy, as follows:

### REPORT OF THE NOMINATING COMMITTEE

Your committee on nominations begs leave to submit the following report:

Vice presidents, R. L. Neff, Joplin; T. J. Rigdon, Kennett; Thomas Chowning, Hannibal; W. C. Gayler, St. Louis; James Q. Chambers, Kansas City.

Councilors: Second District, O. C. Gebhart, St. Joseph; Third District, A. H. Vandivert, Bethany; Fourth District, J. B. Wright, Trenton; Fifth District, J. R. Bridges, Kahoka; Sixth District, J. W. Martin, Kirksville; Seventh District, T. J. Downing, New London; Eleventh District, G. W. Hawkins, Salisbury; Twelfth District, Spence Redman, Platte City; Sixteenth District, G. D. Allee, Lamar (to fill unexpired term, E. N. Chastain, resigned); Seventeenth District, Guy Titsworth, Sedalia.

Committee on Health and Public Instruction: J. D. Brummall, Salisbury; G. C. Eggers, Clayton; H. E. Pearce, Kansas City.

Defense Committee: C. E. Hyndman, chairman; R. E. Schlueter, R. S. Vitt, all of St. Louis.

Committee on Cancer: J. F. Binnie, Kansas City, chairman; W. H. Mook, St. Louis; M. C. Stone, Springfield.

Committee on Vaccination: C. A. Goode, St. Joseph. Delegates to the American Medical Association: Franklin E. Murphy, Kansas City; S. L. Baysinger, Rolla; C. R. Woodson, St. Joseph; Elsworth Smith, St. Louis (to fill unexpired term of A. F. Koetter, deceased).

On motion by Dr. F. W. Burke, duly seconded and carried the report of the nominating committee was adopted.

The president appointed Drs. Funkhouser and Woodson to escort the newly elected president, Dr. W. J. Ferguson, to the chair and introduced him to the members. Dr. Ferguson accepted the office to which he had been elected and in thanking the House of Delegates for the honor thus conferred on him he assured the members that he would devote his energies to the best interests of the Association, and appealed to all members to give him their full cooperation to aid him in administering the affairs of the Association properly during his term of service as their president.

On motion the House of Delegates adjourned *sine die*.

### MINUTES OF THE COUNCIL

Tuesday, April 6, 1920

The council met at 1:30 p. m. in the Senate Chamber, Jefferson City, and was called to order by the chairman, Dr. A. R. McComas. The following councilors were present:

E. L. Crowson, First District; O. C. Gebhart, Second District; J. B. Wright, Fourth District; G. W. Hawkins, Eleventh District; Spence Redman, Twelfth District; Franklin E. Murphy, Thirteenth District; L. J. Schofield, Fifteenth District; W. J. Ferguson, Seventeenth District; J. P. Burke, Eighteenth District; S. V. Bedford, Nineteenth District; A. H. Hamel, Twentieth District; G. M. Rutledge, Twenty-First District; H. L. Reid, Twenty-Second District; J. H. Timberman, Twenty-Third District; W. H. Breuer, Twenty-Sixth District; J. C. B. Davis, Twenty-Seventh District.

Dr. Hamel moved that the reading of the minutes be dispensed with and approved as published in the JOURNAL. Seconded and carried.

The chairman read the report of the executive committee, as follows:

### REPORT OF THE EXECUTIVE COMMITTEE

The executive committee of the Council held two meetings since the last annual session. On June 26, 1919, a charter was issued to the Dallas County Medical Society which was organized the previous year but no charter issued. The president announced the names of members of committees all of which were



approved by the executive committee, and the executive committee reappointed the publication committee, consisting of Drs. Breuer, Child and Bliss.

The other meeting was held on March 17, 1920. A request from the St. Louis Medical Society for enrollment of Dr. Montague M. Meyers as an active member without the payment of dues on account of being permanently incapacitated, was granted as the application fulfilled all the requirements of the new by-law applying to such cases. Dr. Schlueter, chairman of the Defense Committee, asked the advice of the executive committee concerning a contribution to assist Dr. Daniel Hochdoerfer of St. Louis in a malpractice suit. Dr. Schlueter stated that Dr. Hochdoerfer had through a probable misunderstanding on his part not made application to the committee in regular form and the suit was several years old when it finally came to the committee's attention. The committee advised Dr. Schlueter to bring the matter before the council at this meeting.

The secretary reported that a check for \$69 for dues of members of Cass County Medical Society had been returned unpaid because the bank was in the hands of a receiver. Before this notice reached the secretary the certificates of membership had been issued. The committee advised holding the check pending payment of the amount or such portion of it as might finally be collectible.

The secretary of the state board of health requested the cooperation of the Association in placing on the ballot a proposition to levy a tax of one-half mill for public health work. The executive committee took no action but referred the matter to the council.

The action of the Jackson County Medical Society in expelling Dr. B. Clark Hyde was sustained by the Circuit Court and Dr. Hyde has appealed to the Court of Appeals.

No question of moment concerning the conduct of members or of the county societies has come to the attention of the committee and in other respects the work of the Association is progressing satisfactorily.

The postgraduate meetings were inaugurated on October 10, the first meeting being held in the Twelfth District at Excelsior Springs. Other meetings were held in Columbia, Mexico, Rolla, Moberly, Cape Girardeau and Springfield. Meetings were prepared for Chillicothe and Mexico but the coal strike prevented the sessions.

In the absence of Dr. Schlueter of the defense committee, Dr. Hamel explained the circumstances of the malpractice suit against Dr. Hochdoerfer.

Dr. Gebhart moved that the defense committee be instructed to allow \$100 for the relief of Dr. Hochdoerfer. Seconded and carried.

Dr. Hamel stated the conditions surrounding the unpaid check for \$69 from Cass County Medical Society and he moved that the check be held awaiting developments in collecting the amount.

Dr. Barnhart moved that the action of the executive committee in regard to the check be approved and the check be held for collection. Seconded and carried.

Dr. Hamel moved that the council approve the proposition of the state board of health to place on the ballot an amendment to the state constitution providing for an assessment of one-half mill tax for public health work and that the committee on health and public instruction lend its aid in this movement. Seconded and carried.

Dr. Breuer moved that \$1,000 be appropriated to the sinking fund and \$1,000 to the defense fund. Seconded and carried.

Dr. Breuer moved that the council indorse the commendation in the president's message that the postgraduate meetings be continued and that hospitals be

established in councilor districts. Seconded and carried.

The question of dues of members in the service mentioned in the secretary's report was taken up.

Dr. Hamel said that since there was nothing in our constitution and by-laws justifying the remission of dues under such circumstances, he moved that the council recommend that the county societies pay the state assessment of such members. Seconded and carried.

The question of printing in monogram form the report of the committee on medical education was discussed.

Dr. Hamel moved that the report be reprinted with cover from the JOURNAL and copies of this reprint be mailed to county superintendents of schools. Seconded and carried.

The chairman appointed the following auditing committee: Drs. Breuer, Murphy, Gebhart.

Dr. Hamel stated that the Association had favored the mental survey of the state made by the National Committee on Mental Hygiene at the request of Governor Gardner, and therefore he moved that \$100 be appropriated toward defraying the expense of printing the report in order that the facts may be distributed in proper form. Seconded and carried.

On motion adjourned to meet immediately after the House of Delegates adjourns on April 7.

#### Wednesday, April 7, 1920

The council met in the Senate Chamber of the State House at 12:15 p. m., Wednesday, April 7, 1920, and was called to order by the chairman, Dr. A. R. McComas. Sixteen members were present.

On motion the reading of the minutes of the last meeting were dispensed with.

The election of officers for the ensuing year being the first order of business, Dr. Hamel nominated Dr. McComas for chairman of the council and by motion duly seconded the nominations were closed and Dr. McComas was declared elected chairman by acclamation.

The other officers of the council elected by motions regularly made and seconded are: Executive committee: Drs. McComas, chairman; Breuer and Hamel; secretary, Dr. E. J. Goodwin.

Dr. Burke nominated Dr. Welch to succeed himself as treasurer of the Association.

In seconding the nomination of Dr. Welch, Dr. Hamel said he wanted to incorporate a token of appreciation by the council of the splendid condition of our organization which was, he said, due in large measure to the splendid work of the treasurer. Dr. Welch has a system of financing and accumulating and conserving of our funds such as is seldom found. Therefore he believed the council should record its hearty approval and high appreciation of the excellent services Dr. Welch has rendered to the Association. The motion was put as seconded and carried unanimously.

Dr. Welch, in responding to this expression of appreciation, said: "This Association has complimented me in so many ways that there has been ignited in my heart a flame that will never cease to burn. There is nothing this Association can lay on me that I would not undertake to do to the best of my ability. I thoroughly appreciate all the honors that have been bestowed on me; and especially this token of your confidence, at this time more keenly than at any other time in the past. I realize that the time is soon coming when we shall not meet each year as we are now doing. The frosts of many winters are whitening the heads of more than one of us and soon a younger generation must fill our places. I realize that the office of treasurer should be continued from year to year and not be changed often as it would

then soon fall into a drifting condition that would not be good for the Association. I would urge on you therefore that you look about for younger shoulders more able to bear this burden. I thank you and shall serve you to the best of my ability."

Dr. Hamel nominated Dr. Goodwin for reelection as secretary-editor of the Association. Dr. Breuer moved that nominations be closed and Dr. Goodwin be elected by acclamation. Seconded and carried.

Dr. Breuer, chairman of the auditing committee, reported that the committee had audited the books of the treasurer and the secretary and had found them correct.

The chairman appointed Dr. Hamel to represent the council at the meeting of the secretaries with instructions to call the attention of the secretaries to the necessity of making necrologic reports on deceased members.

On motion the council adjourned *sine die*.

## MINUTES OF THE GENERAL MEETING

### Tuesday, April 6, 1920—Morning Session

The General Meeting was called to order at 9:20 a. m., April 6, 1920, by the president, Dr. N. P. Wood of Independence, in the House of Representatives.

The minutes of the previous meeting having been published in the JOURNAL, it was moved by Dr. E. F. Robinson that the reading of the minutes be dispensed with. Seconded and carried.

The president vacated the chair to attend the House of Delegates and for the balance of this session Dr. J. J. Gaines, Excelsior Springs, first vice president, acted as chairman, and Dr. W. C. Gayler, St. Louis, acted as secretary.

Dr. G. Wilse Robinson, Kansas City, read a paper entitled "Diagnosis of Peripheral Nerve Injuries."

Dr. R. D. Irland, Kansas City, read a paper entitled "Peripheral Nerve Injuries."

These two papers were discussed by Drs. Francis Reder, St. Louis; J. F. McFadden, St. Louis; M. A. Bliss, St. Louis; Ernest F. Robinson, Kansas City; T. G. Orr, Kansas City; W. T. Coughlin, St. Louis, and the discussion closed by Drs. Robinson and R. D. Irland.

Dr. Q. U. Newell, St. Louis, read a paper on "Full Term Extra-Uterine Pregnancy." There was no discussion of this paper.

Dr. W. T. Coughlin, St. Louis, read a paper entitled "Artificial Anus." This paper was discussed by Drs. S. B. Hibbard, Kansas City; John G. Sheldon, Kansas City, and the discussion closed by Dr. Coughlin.

Dr. Ernest F. Robinson read a paper entitled "Transplantation of Bone." The discussion of this paper was postponed until the afternoon session.

Adjournment until 1:30 p. m.

### Afternoon Session

The session was called to order at 1:30 by Dr. J. J. Gaines, vice president.

Dr. E. F. Robinson's paper was discussed by Drs. John G. Sheldon, Kansas City, and Robinson in closing.

Dr. H. S. Valentine, Kansas City, read a paper entitled "Traumatic Aneurysm." There was no discussion of this paper.

Dr. M. H. Clark, Kansas City, read a paper entitled "The Present Status of Nitrous Oxide Anesthesia." There was no discussion of this paper.

Dr. J. Q. Chambers, Kansas City, read a paper on "Abdominal Lues." There was no discussion of this paper.

The president, Dr. Wood, took the chair.

Dr. J. J. Gaines, Excelsior Springs, read a paper entitled "Five Years' Experience with Stock Vaccines."

Dr. Gaines' paper was discussed by Drs. Homer L. Kerr, Crane, and by Dr. Gaines in closing.

Dr. Gaines resumed the chair.

Dr. John Green, Jr., St. Louis, read a paper entitled "Dacryocystitis, Treated by Curettage and Rapid Dilatation."

Dr. W. H. Schutz, Kansas City, read a paper on "Subconjunctival Injections of Cyanide of Mercury in the treatment of Corneal Infections."

Dr. William F. Hardy, St. Louis, read a paper entitled "The Eye, the Window of the System."

This symposium was discussed by Drs. J. S. Lichtenberg, Kansas City; F. E. Woodruff, St. Louis; W. H. Schutz, Kansas City; William F. Hardy, St. Louis, and the discussion closed by Drs. John Green, Jr., W. H. Schutz and William F. Hardy.

Moved by Dr. J. C. McComb of Lebanon that Dr. Frank G. Nifong of Columbia be allowed to read his paper at this time instead of in its regular order Thursday morning. Motion seconded by Dr. Morris S. McGuire of Arrow Rock, but lost.

Dr. V. W. McCarty, Kansas City, read a paper entitled "Streptococcic Mastoiditis." This paper was discussed by Dr. W. H. Schutz, Kansas City.

Dr. E. G. Mark, Kansas City, read a paper entitled "Surgery of Gonorrhea in the Male." This paper was discussed by Drs. C. E. Burford, St. Louis; H. McC. Young, St. Louis; Neil S. Moore, St. Louis, and the discussion closed by Dr. E. G. Mark.

Dr. Elsworth Smith, St. Louis, read a paper entitled "Cardiolysis for Chronic Adhesive Pericarditis." This paper was discussed by Dr. J. C. Lyter, St. Louis, and the discussion closed by Dr. Smith.

It was moved by Dr. Elsworth Smith that Dr. Frank G. Nifong be allowed to read his paper at this time. Motion seconded and carried.

Dr. Frank G. Nifong, Columbia, read a paper entitled "A Plea for a State General Hospital Affiliated with County Hospitals; and for Completed Medical Education in Missouri University." There was no discussion of this paper.

Adjournment until Wednesday morning.

### Wednesday, April 7, 1920—Morning Session

The meeting was called to order at 9:20 by Dr. W. A. Clark, Jefferson City, vice president.

The president, Dr. N. P. Wood, Independence, read his address.

It was moved by Dr. A. R. McComas, Sturgeon, that the House of Delegates meet at 11 o'clock instead of at 2 in the afternoon. Motion seconded by Dr. J. Franklin Welch, Salisbury, and carried.

As Governor Gardner was not yet ready to deliver his address it was decided to begin the Symposium on Cancer.

Dr. Vilray P. Blair, St. Louis, read a paper entitled "Operative Treatment of Cancer of the Tongue."

Dr. Ellis Fischel, St. Louis, read a paper entitled "Use of Radium in Cancer of the Face, Jaws and Oral Cavity."

Hon. Frederick D. Gardner, governor, then delivered an address of welcome, to which Dr. N. P. Wood made a brief response.

It was moved by Dr. A. H. Hamel, St. Louis, that the motion to reconvene the House of Delegates at 11 o'clock be reconsidered, and that the House meet at 2 o'clock, according to the program.

Dr. W. H. Breuer, St. James, offered an amendment to the effect that the House of Delegates immediately go into session and the scientific program be postponed until afternoon. An amendment to this amendment was offered—that the scientific program be continued, and the motion as last amended, that the



House of Delegates meet immediately and the scientific program be continued, was carried.

Dr. C. F. Sherwin, St. Louis, read a paper entitled "The Actual Cautery in the Treatment of Superficial Cancer."

Dr. L. A. Marty, Kansas City, read a paper entitled "Modern Treatment of Malignancies."

Dr. E. C. Ernst, St. Louis, read a paper entitled "Deep Therapy with Roentgen Ray."

Dr. W. E. Leighton, St. Louis, read a paper entitled "Inoperable Cancer."

The discussion of this symposium was postponed until the afternoon session.

Adjournment until 1:30 p. m.

#### Afternoon Session

The Wednesday afternoon session was called to order at 2:05 by the president, Dr. N. P. Wood.

The Symposium on Cancer was discussed by Drs. J. D. Griffith, Kansas City; Henry J. Scherck, St. Louis; W. T. Coughlin, St. Louis, and the discussion closed by Drs. Ellis Fischel, C. F. Sherwin, L. A. Marty, and E. C. Ernst.

Dr. John Zahorsky, St. Louis, read a paper entitled "Summer Diarrhea in Infants."

Dr. M. J. Lonsway, St. Louis, read a paper entitled "Feeding of Athreptic Infants."

These two papers were discussed by Drs. E. H. Schorer, Kansas City; T. C. Hempelmann, St. Louis; William A. Braecklein, Higginsville, and the discussion closed by Drs. John Zahorsky and M. J. Lonsway.

Dr. F. C. Neff, Kansas City, read a paper entitled "Examination of the Infant."

Dr. M. B. Clopton, St. Louis, read a paper entitled "Malignant Growths in Children."

These two papers were discussed by Drs. E. H. Schorer, Kansas City; Ellis Fischel, St. Louis, and discussion closed by Dr. M. B. Clopton.

Dr. C. B. Francisco, Kansas City, read a paper on "Recent Observations on Perthe's Disease."

Dr. C. A. Stone, St. Louis, read a paper entitled "Treatment of Spinal Tuberculosis in Children."

Dr. William W. Hoyt, St. Louis, read a paper entitled "Bone Tuberculosis: Surgical and Sociological Aspects."

Dr. J. Edgar Stewart, St. Louis, read a paper entitled "Tuberculosis of the Hip."

Before the discussion of this symposium the president asked Dr. E. H. Schorer and Dr. M. P. Shy to escort to the platform the newly-elected president, Dr. W. J. Ferguson of Sedalia.

In introducing Dr. Ferguson, Dr. Wood said: Gentlemen, I have the pleasure to present your president-elect. I congratulate the Association on your wise selection. You have chosen a man who has been faithful and active in the service of the Association. I have known him ever since I have been a member and many years before, and it has been my observation that he has done whatever duty has been given him and done it well. He is a man active in his profession, an aggressive, up-to-date man, one of the finest from your ranks.

Dr. Ferguson, I present you with this gavel, the emblem of authority. May you wield it with wisdom and prudence during your administration. I want to assure you that there are complexities and duties commensurate with the honor bestowed on you, and you will find plenty of work, but I can also assure you that you will have the cooperation of the officers of this Association and of the entire membership. May I not hope, Doctor, that when you have closed your administration you will have written the brightest page in the history of this Association. Gentlemen, I thank you. (Applause.)

In accepting the presidency Dr. Ferguson said: "I have no set speech to make, except that I am willing

to assume the duties as president that have been thrust on me, and I assure you I appreciate the honor. I thank you very much." (Applause.)

The symposium on tuberculosis of the bones was then discussed by Drs. J. D. Griffith, Kansas City; R. M. Schaffler, Kansas City; Frank C. Dickson, Kansas City, and the discussion closed by Drs. C. B. Francisco, C. A. Stone, William W. Hoyt, and J. Edgar Stewart.

Adjournment until Thursday morning.

#### Thursday, April 8, 1920—Morning Session

The Thursday morning session was called to order at 9:20 by the newly-elected president, Dr. W. J. Ferguson.

Dr. W. D. Hammond, St. Louis, read a paper entitled "Practical Therapeutics in Dermatology."

Dr. W. H. Stauffer, St. Louis, read a paper entitled "Relation of the Proctologist to Group Medicine."

These two papers were discussed by Drs. David S. Booth, St. Louis; Ralph W. Holbrook, Kansas City, and the discussion closed by Drs. W. H. Stauffer and W. D. Hammond.

Dr. S. P. Child, Kansas City, read a paper entitled "Social Medicine." This paper was discussed by Drs. A. H. Hamel, St. Louis; C. Lester Hall, Kansas City; R. L. Russell, Jefferson City, and the discussion closed by Dr. S. P. Child.

Dr. R. L. Russell, Jefferson City, read a paper entitled "Missouri's Fight Against Venereal Disease." This paper was discussed by Drs. David S. Booth, St. Louis, and Hermon S. Major, Fulton.

It was moved by Dr. A. H. Hamel that a vote of thanks be extended to the Committee on Arrangements, to the Cole County Medical Society, and to the citizens of Jefferson City, for their hospitable entertainment. Motion seconded and carried.

On motion adjourned *sine die*.

#### REPORT OF THE SECRETARY-EDITOR, 1920

The condition of the Association may be regarded with considerable satisfaction for we have passed through the war period and met the restoration to normal activities with the loyalty of our members well sustained and our numerical strength unimpaired. In fact, the total number of members at this date exceeds the number of any previous year.

A condition that will require the attention of the House of Delegates concerns members honorably discharged from active service during 1919 who have not paid 1919 dues. There are 160 in this category. If the House of Delegates desires to clear the record of these members so that they may enjoy continuous membership without the payment of the 1919 assessment, appropriate action should be taken at this meeting.

The postgraduate meetings were inaugurated Oct. 10, 1919, the first meeting being held at Excelsior Springs in the twelfth councilor district. It was a splendid success and plans were laid for future meetings. Dr. Spence Redman, the councilor of the district, and Dr. Franklin E. Murphy of Kansas City, councilor of the Thirteenth District, collaborated in preparing the program. Five other meetings were held as follows: Ninth District, Columbia; Tenth District, Moberly; Twenty-Second District, Cape Girardeau; Twenty-Sixth District, Rolla; Twenty-Eighth District, Springfield. Unfortunately, the coal strike, the disturbed railroad conditions, and the influenza, following one on the other after December 10, prevented a meeting at Chillicothe and Mexico, and a contemplated meeting at St. Louis in December.

The great interest in these meetings shown by those who were present leaves no room for speculation on the value of this endeavor. It is a success and it is a

splendid tribute to the spirit of cooperation that those who were invited to speak at the meetings willingly gave their time and substance to the undertaking. The deans of the medical schools also gave their generous support to the work. Dr. Simmons of the American Medical Association watched our progress in this direction with considerable interest. He hopes to reestablish the postgraduate study course sponsored by the national organization.

Notwithstanding the increased cost of producing our JOURNAL due to the high cost of paper, labor, and all materials used in the printing trade, the treasurer's report will show that we closed the fiscal year on December 31, with a comfortable balance in the treasury. The advertising rates have been increased about 25 per cent. without the loss of a single contract. The new rates apply to contracts made this year but all firms who were represented in the JOURNAL in 1919, constituting the bulk of our contracts, will pay the new rate beginning with January, 1921. Therefore the income from advertising during 1921 should equal if not exceed the expenses.

The JOURNAL is listed in all standard reference works and finds a place on the shelves of the principal medical libraries.

The county society secretaries will hold their twelfth annual meeting tomorrow afternoon. The continued growth and prosperity of the Association depends largely on the activity and devotion of these gentlemen and their services cannot be too highly praised. All members are welcome to visit the meeting and take part in the discussions.

The vigor and strength of our Association should be a source of pride to every member. We have grown in numbers, we have grown in influence, we have grown in affluence. We can continue this growth until every reputable physician in the state is enrolled in our membership and the Association take that commanding position in all matters pertaining to the health of the people and the protection of the professional and material rights of the physician which should be ours.

The expenses of the office are set down in itemized form in regular double entry bookkeeping and audited twice annually by a certified public accountant. They are again audited by a committee of the council, and the Association is further protected by bonding the secretary. A copy of the records is here for examination.

#### MEMBERSHIP

Number of members, April 20, 1919.....	3,363
New members .....	192
Reinstated .....	6
	3,561
Resigned .....	13
Transferred .....	26
Dropped .....	37
Deceased .....	55
	131
Number of members, March 20, 1920.....	3,430
Increase .....	67

E. J. GOODWIN, Secretary-Editor.

#### REPORT OF THE DEFENSE COMMITTEE

Your defense committee reports that thirty-six cases have been brought before them during the past year—twelve of these were filed before the last annual meeting and twenty-four were new cases which arose during this fiscal year.

Eight were only threatened suits which have not yet been carried into court and there is little likelihood that suit will be brought in any of these instances. Nineteen are still pending in court. One of these has been in court since the year 1912 and resulted in a verdict in favor of the defendant. It was appealed and reached the state supreme court several months ago and then was remanded for a new trial. Of those

which have terminated two were compromised, two were withdrawn by the plaintiff, two were dismissed by the court without hearing the evidence for the defendant, two resulted in a verdict for the defendant after a trial.

These comprise only a part of the malpractice cases against our members. Most doctors are holders of policies against malpractice suits; some of these are in companies which ignore the committee and the interests of the organized profession. Thus the committee is not informed concerning these cases and sometimes the interests of the profession are not considered in their final disposition.

We recommend that each councilor advise the defense committee of every demand for alleged malpractice which arises in his district. Whether or not assistance is requested there may be points in the case which would be of value to all of us.

One notable decision of the circuit court of St. Louis may be of general interest. The plaintiff had received damages from the industrial concern in whose employ he was injured, therefore the court ruled that he could not thereafter receive additional damages for the same injury even if there had been malpractice. To our knowledge, this is the first decision of the kind.

The treasurer has reported on the expenditure of this committee and the present condition of the defense fund.

We respectfully request that \$1,000 be added to the fund at this meeting.

One instance in which the committee is unable to decide the right to pay a claim of a member for financial assistance in his malpractice case will be brought to the attention of the council at this meeting.

Respectfully submitted,

R. E. SCHLUETER, Chairman.  
R. S. VITT.  
C. E. HYNDMAN.

#### REPORT OF COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION

The committee on health and public instruction begs leave to report that since this is an off year and the legislature has not met since 1919 there is nothing to report of a legislative character.

The oftener the Association visits the legislature the more impressed is it with the necessity of being awake and watching the many different bills that are sure to be presented. Because the hygienic, sanitary, and medical laws are not inferior to the best in the most progressive states of the country, there must be no relaxation in keeping up the high standard that this state has ever maintained. Though these laws now exist here, there should be no neglect in looking after medical matters and nothing taken for granted in the future. The committee does not favor keeping a lobby at the capital. In the main the legislators and the public are beginning to admit that the average doctor is out for improvement and has the welfare of the public at heart.

The workman's compensation law has not been observed generally in Missouri owing to the opposition of the labor unions, who have petitioned for a referendum. The circuit court ruled against the unions who appealed to the supreme court where it is pending. Some companies are working under the law; many are not.

Compulsory health insurance has been definitely opposed by the New York State Medical Association and the Chicago Medical Society.

Industrial medicine involving contracts between the physician and the company is a phase of practice that should have our attention.

Your committee recommends that the House of Delegates appoint a committee to consider these questions and report at the next annual meeting.



Your committee recommends that the delegates to the American Medical Association organize annually by the election of a chairman and a secretary and report to the House of Delegates and to the executive committee of the Association at least within two weeks after the meeting of the American Medical Association and that the secretary-editor be authorized to print the report as soon as practicable in the JOURNAL of the Association.

Your committee indorses the establishment of third and fourth years of study in connection with the state university at Columbia and will heartily cooperate with the committee on medical education in furthering in any suitable manner a definite, acceptable plan, with this object in view.

R. M. FUNKHOUSER, Chairman.

#### TO THE GOVERNOR AND LEGISLATURE OF THE STATE OF MISSOURI

More than three thousand medical men of the state of Missouri who are voters, taxpayers, and public spirited citizens, represented by our organization, the Missouri State Medical Association, do most courteously represent to you certain urgent needs in medical service, and medical education which are demanded by these critical times of reconstruction.

Medical service and medical education are having to meet and solve new conditions and new problems as are all other professions and businesses. Inasmuch as our professional work has more to do with the general welfare of the state than any other it seems only fitting and just that we pray you that the state help to make conditions most favorable, that we may render our services most effectively. This is a plea for state aid only to the extent that conditions may be made most favorable for citizens to receive the fullest benefit from medical service and medical education. This communication is to indicate to you, in part only, the great present needs for service to our people and to outline somewhat the demands coming on us as a profession.

One of the most urgent needs for better modern medical service is an increased number of hospitals. Modern medicine and the hospital idea are now inseparable. Modern scientific medicine is now much handicapped without hospital aid. You have given us a law making it possible for counties as a unit to erect public general hospitals, which is good. City and private hospitals are increasing but too slowly. The state is committed to the hospital idea in having four special hospitals for the insane and one for the tuberculous people. It is equally the obligation of the state to supply a general hospital service for the care of all manner of diseases, many of which jeopardize the peace of a community more than the homicidal tendencies of an insane patient. Many of our population are remote from all hospital service and need state aid.

We need a state general hospital to care for all manner of diseases. It is a humane obligation and would be good business also, restoring the curable individual and sending him back to productive and useful life. The restoration of the curable makes a state general hospital therefore more necessary than the state hospital for the insane, most of whom never return to normal living.

In addition to furnishing the state general hospital service, as some states are beginning to do, the state of Missouri should also furnish her medical men completed medical education, which she does not do now. The state requires a certain standard of efficiency in a medical man before he is allowed to practice his profession. To our shame the state of Missouri does

not furnish the means to acquire this requisite education. This is most unnatural and unjust. We now have only two years of medical education in the University of Missouri and this is good so far as it goes. Our students must then go elsewhere to finish—not a dignified position for a great state to occupy. This is an obligation of the state to give our sons complete education in medicine that they may serve her well. As much should be done for medical education as for law, engineering, or any other profession, and we challenge comparison with any other profession as to the benefits returned to the people. This old Jeffersonian idea of higher professional and technical education is not now debatable. No other profession can or does return more to the state than a highly educated medical profession. Therefore complete and adequate medical education from the state would be excellent business.

To compel medical education in the state university in the clinical years, hospital facilities are necessary. To meet this deficiency a state general hospital would be necessary to furnish the varied clinics needed for teaching. A state general hospital under the management of the medical department of the state university would then serve the double purpose of helping in the teaching of our profession and caring for the sick and unfortunate all over the state. A state general hospital may still further increase its usefulness both in service to the sick and educating the entire people by a system of articulation with our coming numerous county, city and private hospitals. These hospitals may be accredited and allowed to articulate with the state general hospital if they be "standardized" (have a certain standard of excellence in service and equipment prescribed by the state). These accredited institutions may have their work supplemented, both clinical and laboratory, by the state medical school and hospital, thus mutually benefiting and increasing greatly the usefulness of both. Such a system of articulation would coordinate and harmonize medical work all over the state and make a standard of medical service not found in any other commonwealth.

The time has come for the spreading of a more general knowledge of sanitation and the laws of health among all the people. Medicine is now a science with definite laws and a general knowledge of these laws will soon extend the span of human life and add much to the health and happiness of all. No other knowledge may prove of more benefit to all. This educational function properly belongs to the state, and indeed no private agency may successfully undertake it if so inclined. This educational work may be well undertaken by our schools and especially by an extension department in the medical department of the state university. By the means of popular lectures, advertising, bulletins, and all forms of visual education, no one can estimate the ultimate value of such work and the additional cost would be merely nominal.

By coordinating the work of the medical department of the University of Missouri with schools and state and county boards of health, not only will general postgraduate work, so necessary in our profession that we may keep pace with the rapid progress being made, be greatly aided but a much higher standard of medical service will be secured all over the state.

Education is the only means to accomplish these most beneficent results. To have this we must have a medical department in the state university second to no other state. To have such a medical department we must have a state general hospital.

Then give us this state general hospital, we pray you, for our medical department of the University of Missouri.

If you will do this you will do much for us as a profession in circumventing any possible vicious schemes always so ready to exploit the medical profession. You will do much, through us, for yourselves and everybody by keeping medical service on a democratic plane where individuality is not lost and the best that one has is given in the service to the people. By such an act you will do more for the general welfare of the people than you can now possibly comprehend.

F. G. NIFONG, M.D.

## REPORT OF COMMITTEE ON BLINDNESS

Your committee's activities in the past year have been largely confined to cooperating with the Missouri Commission for the Blind in the almost Augean task of stamping out the rapidly increasing cause of blindness in Missouri, viz., trachoma. This subject has been given publicity in the editorials and news items of the JOURNAL of the Association, so that every reader should by this time be cognizant of the menace and be ready to assist in the remedy.

Your committee believes that the only effective means of combating any danger to the public health is the education of each community by the county societies not only in the newspapers but also in the schools. Therefore, our work has been almost exclusively confined to advocating the publication of useful items in the papers by the secretaries of the county societies, and for this purpose the state was divided into arbitrary districts so that each member of the committee has written a certain number of letters to the medical men in his district.

We believe that the enlistment of interest in these momentous questions of safety will accomplish more than the enactment of state laws alone, because the cooperation of county authorities must be obtained before any state law can be enforced. A striking example of this fact is shown in the very inadequate enforcement of our state law against the use of the roller towel. If the county societies will continue their campaign of education of the people, this pernicious evil will be eradicated in each community; but, on the other hand, if the physicians of the state do not continue interested, blindness will certainly increase in Missouri.

Respectfully submitted,

J. W. CHARLES, Chairman.

## REPORT OF THE TREASURER

### General Fund

May 29, 1919, to March 31, 1920

<i>Receipts</i>	
Sale typewriter .....	32.00
Advertising in Journal.....	4,269.18
Interest on daily balance.....	92.50
Assessment from county societies.....	9,318.00
Total .....	13,711.68
Balance from last year.....	6,063.38
	19,775.06
<i>Disbursements</i>	
Transferred to Sinking Fund.....	1,000.00
Transferred to Defense Fund.....	500.00
Reporter at annual meeting.....	131.28
Am. Med. Ass'n., Printing Journal, June, 1919, to March, 1920.....	4,837.92
Salaries .....	4,590.00
Rent .....	450.00
Secretary for incidental expenses.....	1,050.00
Committees .....	219.51
Miscellaneous .....	618.88
Refund to county societies.....	72.00
One typewriter .....	102.50
Memorial tablet .....	75.00
Office equipment .....	63.20
Total .....	13,710.29
Balance on hand.....	6,064.77
	19,775.06

### Defense Fund

#### *Receipts*

Transferred to General Fund .....	500.00
Interest on daily balance.....	62.00
Total .....	562.00
Balance from last year.....	2,355.55
	2,917.55

#### *Disbursements*

T. J. Dulaney .....	50.00
G. G. Briggs.....	100.00
J. T. Davis.....	100.00
Jordan, Rasser and Pierce.....	160.92
St. Louis Printing Company.....	24.30
Hugh Miller.....	100.00
Total .....	535.22
Balance on hand.....	2,382.33
	2,917.55

### Sinking Fund

#### *Receipts*

Transferred from General Fund.....	1,000.00
Interest on daily balance.....	149.40
Total .....	1,149.40
Balance from last year.....	4,853.98
	6,003.38

### SUMMARY OF CASH BALANCE, MARCH 31, 1920

General Fund, balance on hand.....	6,064.77
Defense Fund, balance on hand.....	2,382.33
Sinking Fund, balance on hand.....	6,003.38
Grand total .....	14,450.48

## MEMBERS REGISTERED AT THE SIXTY-THIRD ANNUAL MEETING, JEFFERSON CITY

April 6, 7, 8, 1920

Aldridge, M. R., Jefferson City  
 Allee, W. L., Eldon  
 Alton, G. P., Gashland  
 Bagby, B. H., Centertown  
 \*Baker, K. E., Carthage  
 Barnhart, D. A., Huntsville  
 Baysinger, S. L., Rolla  
 Bedford, S. V., Jefferson City  
 Benton, A. W., Neosho  
 Berrey, Robert W., Mexico  
 Biggs, M. O., Fulton  
 Black, W. D., St. Louis  
 Blackburn, Quin, Fulton.  
 Blair, V. P., St. Louis  
 Bliss, M. A., St. Louis  
 Booth, David S., St. Louis  
 Braecklein, W. A., Higginsville  
 Breuer, W. H., St. James  
 Brickey, Paul A., Boonville  
 Brummall, J. D., Salisbury  
 Brunner, E. E., Carrollton  
 Bruton, James W., Ozark  
 Bullock, E. H., Kansas City  
 Burford, C. E., St. Louis  
 Burke, John P., California  
 Callaway, L. H., Nevada  
 Campbell, Watson, Kansas City  
 Chambers, J. Q., Kansas City  
 Child, Scott P., Kansas City  
 Chowning, Thomas, Hannibal  
 Clark, A. B., Joplin  
 Clark, Morris H., Kansas City  
 Clark, W. A., Jefferson City  
 Clopton, M. B., St. Louis  
 Cole, Paul F., Ewing  
 Conover, C. C., Kansas City  
 Conway, Arthur, Webster Groves  
 Cook, F. L., Independence  
 Cooley, Edward L., St. Louis

\* Visitor.



Cooper, J. O., Jefferson City  
 Cotton, T. W., Van Buren  
 Coughlin, W. T., St. Louis  
 Crabtree, R. E., Butler  
 Craig, T. B. M., Nevada  
 Crane, T. V. B., Springfield  
 Crews, R. N., Fulton  
 Crowson, E. L., Pickering  
 Cuppaidge, G. O., Moberly  
 Davis, J. C. B., Willow Springs  
 Davis, Paul C., Madison  
 Dawson, J. W., Nevada  
 Dickson, Frank D., Kansas City  
 Dorris, R. P., Jefferson City  
 Dyer, D. P., Sedalia  
 Dysart, W. P., Columbia  
 Earnest, C. E., Kansas City  
 Eaton, J. L., Farmington  
 Eggers, G. C., Clayton  
 Enloe, Cortez F., Jefferson City  
 Ernst, Edwin C., St. Louis  
 Evans, Edwin E., Fulton  
 Fallet, Charles E., DeSoto  
 Fassett, Charles Wood, Kansas City  
 Ferguson, A. D., Fulton  
 Ferguson, W. J., Sedalia  
 Fischel, Ellis, St. Louis  
 Fischer, J. G. W., Alma  
 Forgrave, H. S., St. Joseph  
 Francisco, C. B., Kansas City  
 Freudenberg, H. C., Clarksburg  
 Funkhouser, Robert M., St. Louis  
 Furnish, J. A., Shelby  
 Gaines, J. J., Excelsior Springs  
 Gayler, W. C., St. Louis  
 Gebhart, Oliver C., St. Joseph  
 Gillham, Frank W., Jefferson City  
 Goodwin, E. J., St. Louis  
 Gove, H. S., Linn  
 Green, John, Jr., St. Louis  
 Griffin, Fred, Mexico  
 Griffith, J. D., Kansas City  
 Haire, Robert D., Clinton  
 Hall, C. L., Kansas City  
 Hamel, A. H., St. Louis  
 Hansen, Walter J., St. Joseph  
 Hardy, William F., St. Louis  
 Hawkins, G. W., Salisbury  
 Hayward, John D., St. Louis  
 Hempelmann, T. C., St. Louis  
 Herndon, A. S., Camden Point  
 Hibbard, Sherman B., Kansas City  
 Hill, Howard, Kansas City  
 Hill, James A., Jefferson City  
 Holbrook, Ralph W., Kansas City  
 Holdenried, W. E., St. Louis  
 Hornback, J. T., Nevada  
 Hoyt, William W., St. Louis  
 Hume, E. L., New Bloomfield  
 Irland, Robert D., Kansas City  
 Jackson, Jabez N., Kansas City  
 Jarvis, J. F., Sweet Springs  
 Jenkins, J. M., St. Peters  
 Johnson, William E., Warrensburg  
 Jolley, J. Frank, Mexico  
 Jones, George H., Jefferson City  
 Kenney, W. L., St. Joseph  
 Kerr, H. L., Crane  
 Kerr, U. F., Springfield  
 Ketcham, C. M., Carthage  
 \*Kilbourne, B. K., Topeka, Kan.  
 Kimbrough, J. S., St. Louis  
 Kimsey, J. T., Lathrop  
 Kirchner, Walter C. G., St. Louis  
 Knott, Minerva, Sedalia  
 Kouns, D. H., Tuscumbia  
 Latham, Logan L., Latham

Leach, H. T., Elston  
 Leighton, W. E., St. Louis  
 Lichtenberg, Joseph S., Kansas City  
 Lindsay, J. W., Orla  
 Liston, E. H., Walker  
 Lockwood, T. F., Butler  
 \*Lowry, Edith B., Sedalia  
 Long, Frank B., Sedalia  
 Lonsway, Maurice J., St. Louis  
 Lutman, H. N., Versailles  
 Lyter, J. Curtis, St. Louis  
 McAlester, A. W., Columbia  
 McAlester, A. W., Jr., Kansas City  
 McCann, J. P., Warrensburg  
 McCarty, Virgil W., Kansas City  
 McComas, A. R., Sturgeon  
 McComb, J. A., Lebanon  
 McCormick, F. L., Moberly  
 McCutchan, George L., Canton  
 McFadden, James F., St. Louis  
 McGuire, M. S., Arrow Rock  
 McKay, H. S., St. Louis  
 McMurtrey, A. T., Salem  
 Major, Hermon S., Fulton  
 Manning, D. F., Marshall  
 Mansur, E. E., Jefferson City  
 Mark, Ernest G., Kansas City  
 Martin, Clarence, St. Louis  
 Marty, L. A., Kansas City  
 Matthews, F. H., Liberty  
 Meade, R. H., Kansas City  
 Miller, E. H., Liberty  
 Miller, W. C., Labadie  
 Miller, W. McN., St. Louis  
 Mitchell, Guy B., Branson  
 Monroe, Lee E., Bonne Terre  
 Mook, W. H., St. Louis  
 Moore, Neil S., St. Louis  
 Moore, T. E., Trenton  
 Morley, Frank, Sedalia  
 Moss, F. M., Paris  
 Munsch, A. P., St. Louis  
 Murphy, Franklin E., Kansas City  
 Musgrave, J. E., Excelsior Springs  
 Neal, J. Park, Kansas City  
 Neff, Frank C., Kansas City  
 Neff, Robert L., Joplin  
 Neilson, C. H., St. Louis  
 Newell, Quitman U., St. Louis  
 Nifong, Frank G., Columbia  
 Norris, W. A., Columbia  
 North, Emmett P., St. Louis  
 Noyes, Guy L., Columbia  
 O'Dell, T. T., Marionville  
 Oliver, Evertt A., Richland  
 Orr, Thomas G., Kansas City  
 Overholser, M. P., Harrisonville  
 Owens, J. H., Sweet Springs  
 Park, H. C., Knobnoster  
 Parker, E. L., Excelsior Springs  
 Patterson, William R., Warrensburg  
 Pearse, Herman E., Kansas City  
 Peters, M. L., Cameron  
 Pickard, M. W., Kansas City  
 Pickett, C. P., Mercer  
 Pitzman, Marsh, St. Louis  
 Poague, Samuel A., Clinton  
 Rabenau, W. J., Fordland  
 Ravenel, Mazyck P., Columbia  
 Ravold, H. J., St. Joseph  
 Reder, Francis, St. Louis  
 Redman, Spence, Platte City  
 Reeves, George W., Steelville  
 Reid, H. L., Charleston  
 Roberts, Sam E., Kansas City  
 Robinson, Ernest F., Kansas City  
 Robinson, G. Wilse, Kansas City

Roselle, T. A. Palmyra  
 Russell, R. L., Jefferson City  
 Rutledge, G. M., Ste. Genevieve  
 Salyer, C. E., Shelbyville  
 Schaufler, R. M., Kansas City  
 Scherck, Henry J., St. Louis  
 Schluter, Robert E., St. Louis  
 Schofield, L. J., Warrensburg  
 Schorer, Edwin H., Kansas City  
 Schutz, W. H., Kansas City  
 \*Shaver, Nellie A., St. Louis  
 Sheetz, Bertha E., Trenton  
 Sheldon, J. G., Kansas City  
 Shelton, E. C., Eldon  
 Shelton, M. C., Joplin  
 Shobe, H. G., Jefferson City  
 Shy, M. P., Sedalia  
 Smith, Clinton K., Kansas City  
 Smith, Elsworth S., St. Louis  
 Smith, M. A., Gallatin  
 Smith, Stephen D., Columbia  
 Smith, W. S., Rolla  
 Sneed, C. M., Columbia  
 Stauffer, W. H., St. Louis  
 Stewart, J. Edgar, St. Louis  
 Stine, Dan G., Columbia  
 Stone, Charles A., St. Louis  
 Summers, J. S., Jefferson City  
 Tatum, Harry E., Brunswick  
 Taylor, Herbert I., Jefferson City  
 Thornton, J. E., Columbia  
 \*Threlkeld, Catherine, Ada, Okla.  
 Tice, LaVega, Waynesville  
 Timberman, John H., Marston  
 Titsworth, Guy, Sedalia  
 Valentine, H. S., Kansas City  
 VanRavenswaay, C. H., Boonville  
 Vinyard, G. W., Jackson  
 Vitt, R. S., St. Louis  
 Vores, C. P., Unionville  
 Walker, G. D., Eldon  
 Waterman, J. A., Breckenridge  
 Welch, J. Franklin, Salisbury  
 West, William M., Monett  
 Wilbur, H. L., Granby  
 Williams, J. E., Bourbon  
 Williams, N. C., Springfield  
 Williams, Porter E., St. Joseph  
 Williamson, W. H., Mokane  
 Wilson, G. S., Fortuna  
 Wilson, R. P. C., Marshall  
 Wood, N. P., Independence  
 Woodruff, F. E., St. Louis  
 Woodson, C. R., St. Joseph  
 Woolley, Paul V., Kansas City  
 Wright, J. B., Trenton  
 Wyer, H. G., Kirkwood  
 Yates, Martin, Fulton  
 Young, H. McClure, St. Louis  
 Zahorsky, John, St. Louis  
 Total, 254.

### ST. LOUIS MEDICAL SOCIETY

#### Meeting of the Council, April 14, 1920

The meeting was called to order at 8:30 p. m., Dr. Cyrus E. Burford presiding.

The following applicants for active membership were unanimously elected:

Drs. Michael Henry Dalton, 711 North Kingshighway; Walter E. Frank, 1319 South Broadway; John A. Lotz, 2323 North Union Avenue; Louis E. Printy, Wall Building; Eugene A. Scharff, 943 Arcade Building; James H. Tanquary, 930 Belt Avenue; Hoyt S. Trice, Wall Building; Park J. White, Jr., 5870 Bart-

mer Avenue, and Dr. J. J. Ehreshmann by transfer from the Greene County (Illinois) Medical Society.

Dr. Schluter read the report of the library committee. On motion the report was adopted. Dr. Schluter also read a supplementary report of the library committee stating that the librarian, Miss Casey, had resigned on April 1, and recommended that Miss Hanvey be engaged as librarian. The report was adopted.

Dr. Graves moved that the library committee again be instructed to look into the feasibility of having the library taken over by the St. Louis Public Library. Seconded and carried.

Dr. Tuttle, chairman of the necrology committee, reported that he had prepared a memorial of Dr. Koetter as ordered by the Council, March 10. He also read a letter to Mrs. Koetter from Dr. John Butler of Hawk's Point, Mo.

On motion the memorial and letter were ordered printed in the *Bulletin* and the *JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION*, and the secretary was instructed to send a copy of the memorial to Mrs. Koetter.

Dr. Frederick Hagler's resignation from the hospital committee was read and accepted.

The applications of Dr. John Hogan and Dr. Louis Bothman for active membership by transfer from the Chicago Medical Society were read for the first time.

The treasurer's report for the month of March was read by the secretary and received.

Dr. Reder, chairman of the special committee appointed to solicit funds to overcome the deficit of the society, reported that \$271 had been received to date.

Dr. Gayler reported for the special committee appointed to look into the matter of inserting advertisements in the *Bulletin* and was instructed to communicate with the Chicago Publishing Company relative to plans of publication.

Councilors present: Drs. Burford, Falk, Gayler, Graves, Hamel, Caulk, Coughlin, North, Reder, Smith and Gundlach.

Councilors absent: Drs. Engelbach, Engman, Bliss.

Visitors present: Drs. George M. Tuttle, R. E. Schluter, C. E. Hyndman, F. J. V. Krebs.

#### Meeting of May 11

The meeting was called to order at 8:45 p. m. by the president, Dr. Cyrus E. Burford.

The scientific program consisted of the following: "Remarks on the Treatment of Lymphangiomata" (lantern slide demonstration), by Dr. Francis Reder. Discussion by Dr. Henrietta A. S. Borck, Dr. Reder closing.

"Early Active Motion in Fractures Involving Joints," by Dr. M. B. Clopton.

Discussion by Drs. F. H. Ewerhardt, Henrietta A. S. Borck and T. P. Brooks; Dr. Clopton closing.

"Conservatism," by Dr. Fred Bailey.

Discussion by Drs. Elsworth S. Smith, A. H. Hamel; Dr. Bailey closing.

Attendance 63.

ARTHUR GUNDLACH, M.D., Secretary.

### ST. LOUIS COUNTY MEDICAL SOCIETY

Meeting was called to order at Clayton, May 12, by the secretary. In the absence of the president and vice president, Dr. O'Malley was elected temporary chairman. Present: Drs. Sutter, Sudduth, Dunnivant, Denny, O'Malley, Conway.

The minutes of the previous meeting were read and approved. On account of the small attendance caused by inclement weather no business was transacted nor literary program held.

A. CONWAY, M.D., Secretary.



### SOUTHEAST MISSOURI MEDICAL ASSOCIATION

The Southeast Missouri Medical Association held its forty-sixth semiannual session in Farmington, May 4, 5, 6, 1920. The meeting began with an informal reception at the administration building of State Hospital No. 4, followed by a pleasant recess on the lawn, an inspection of the hospital premises and a general survey of the farm. The members of the association were very much pleased with the hospital and its surroundings as well as its good management.

The meeting was formally called to order by Vice President Dr. W. G. Patton of St. Louis, at 4:30 p. m.

Dr. M. A. Bliss of St. Louis assisted by Dr. T. F. Frazer and Dr. P. S. Tate of Farmington favored the association with a very interesting clinic on mental diseases. The patients represented several types of insanity and made that part of the program very interesting.

After dinner the address of welcome was delivered by Dr. J. L. Eaton, superintendent of Hospital No. 4. Dr. Eaton dwelt on the motto, kindness, as being an essential characteristic of an employee for institutional work. He made the association feel that it was indeed welcome.

The response to the address of welcome by Dr. W. R. Goodykoontz of Caledonia, was done in such a manner as to reflect credit on the speaker and was a pleasure to the audience.

On Wednesday morning, May 5, the association met in the club room and a committee consisting of Dr. W. R. Goodykoontz, C. A. Anthony and Dr. W. H. Barron, was appointed to draft resolutions of respect for the late Dr. W. C. Witmer, and submitted the following:

WHEREAS, There has been removed from the roll of our membership the name of Dr. W. C. Witmer, whose death occurred some three months ago; and

WHEREAS, Dr. Witmer was for many years a faithful, active, and valuable member of our association; therefore, be it

*Resolved*, That we express our deep regret and sincere sorrow on account of his death; and be it further

*Resolved*, That the secretary be instructed to spread on the minutes these resolutions.

Dr. G. S. Cannon of Farnfeldt read a paper "Observations on the Recent Epidemic of Influenza." This paper gave in a very nice manner many interesting facts concerning the two recent epidemics of influenza. The complications of "flu" were ably dealt with and special stress placed on pneumonia. The paper was discussed by Drs. J. A. Vanamburgh of Burfordville, B. J. Robinson of Farmington, W. S. Hutton of Farnfeldt, C. A. Sander of Marble Hill, W. H. Wescoat of Oran, W. G. Patton of Cape Girardeau, E. J. Nienstedt of Blodgett, P. S. Tate of Farmington, W. H. Barron, Mine LaMotte, and Dr. Cannon in closing.

The association expressed the opinion, that influenza is both infectious and contagious; that the incubation period is about forty-eight hours; that the disease with its symptomatology is sudden in onset; that the respiratory is the prevailing type; that the duration of temperature is four days; that convalescence is prolonged; that pathology involves only mucous membrane in uncomplicated cases but in complicated cases both mucous and interstitial tissues are involved; that the treatment is rest and symptomatic.

A vote of thanks was extended to Dr. William Nifong of Farmington.

At the afternoon session Dr. P. S. Tate read a paper on "Psychosis." Various members expressed pleasure at having heard Dr. Tate's able paper and in closing Dr. Tate suggested that Hospital No. 4

ought to be furnished with additional laboratory equipment for diagnostic purposes.

Dr. John D. Hayward of St. Louis read a paper on femoral hernia that received many compliments.

Dr. A. E. Chase of Texarkana read an excellent paper on the venereal disease campaign in which he emphasized law enforcement, prophylaxis, early treatment.

Jackson was selected as the next meeting place and the following officers were elected for the ensuing year: President, W. G. Patton, Cape Girardeau; vice president, J. A. Vanamburgh, Burfordville; treasurer, W. R. Goodykoontz, Caledonia; corresponding secretary, W. S. Hutton, Farnfeldt; recording secretary, E. J. Nienstedt, Blodgett.

E. J. NIENSTEDT, M.D.

### PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

#### Sixty-Seventh Meeting, Monday, March 29, 1920

1. THE WAR AND PSYCHOLOGY.—By PROF. W. H. R. RIVERS.

#### Sixty-Eighth Meeting, Monday, April 12, 1920

1. EXHIBITION OF CASES.—A. A CASE OF BRONCHIAL ASTHMA SENSITIVE TO WHEAT PROTEINS.—By DR. CHARLES H. EYER-MANN.

White, male, aged 25. First seen in the O. P. D. Nov. 1, 1916, complaining of asthma which had its onset at the age of 16 years, beginning gradually with much coryza and coughing, attacks occurring usually in the middle of the night. No seasonal variation although patient believes the previous summer attacks had been more severe. Has had tonsils, adenoids and turbinates removed and septum straightened, without effect on his asthma.

Past medical history has no bearing on his present trouble.

The examination showed a spare, fairly developed white male, weighing 118.5 pounds with principal physical findings of respiratory musical râles diffusely scattered over his chest. A laryngologic examination showed slight rhinitis. The roentgen ray showed considerable generalized branching, dense hilus shadows on both sides with extensions to the bases.

On Nov. 8, 1916, he was startled on injections of autogenous defibrinated blood as suggested by Kahn and Emsheimer. From Nov. 18, 1916, to Jan. 6, 1917, he received eight injections of defibrinated blood in increasing doses. While receiving these injections he was also placed on the usual No. 2 diet as used in the dispensary. During this time he had two severe and five light attacks of asthma but gained to 137.5 pounds, a gain of about 18 pounds. On questioning it developed that he had been eating on an average of about eight eggs with a quart and a half of milk per day. The gain in weight was most striking and hence occupied the foreground of his therapeutic picture; however, the results on his asthma were not so noteworthy.

On this same diet he reached his best weight on March 19, 1917. At that time weighing 145.5 pounds. He was having attacks at various times, some characterized as severe, others as light, and averaging about one attack in two weeks. He returned June 28, 1917, for a severe attack and was seen by Dr. Robinson from then on.

He again received a series of five injections of defibrinated blood in increasing amounts up to Aug. 24, 1917, and this time without specific instructions as to increasing his diet. During this series his weight

decreased from 132.5 to 124 pounds; he had six attacks of dyspnea, all characterized by the patient as severe. He was again seen at various times during October and November of the same year, still having asthmatic attacks at various and odd times.

On Aug. 29, 1918, he was seen by Dr. Bean complaining that he had again been having severe attacks of dyspnea. From August, 1918, to Sept. 27, 1918, he was given another series of five injections of defibrinated blood, during which time he had two severe attacks of dyspnea. Another period of infrequent visits to the O. P. D. occurred until July 10, 1919, at which time his physical examination was the same as on his first observation and weight of 116 pounds. It was at this time that protein sensitive tests were tried. On September 24 he was found to be sensitive to wheat proteose, glutenin, globulin, gliadin. His weight at this time was 125 pounds. He was instructed to go on a wheat free diet. He returned to the dispensary October 17, stating that he had had one attack which followed within twenty-four hours the eating of a piece of pie, also stated that he had had a severe cold since his last visit but without the usual amount of dyspnea. He has been seen at odd times and has remained absolutely without asthma on a wheat free diet. His weight on our last observation was 141.5 pounds.

It is to be pointed out that the past seven months is the first prolonged period without asthmatic attacks that this patient has had in ten years. That under observation he has produced an attack of asthma by eating wheat. It is further significant that this man has gained from 123 to 141 pounds on a wheat free diet, and that injections of autogenous defibrinated blood failed to influence the course of his disease.

## 2. DIRECT DETERMINATION OF SODIUM IN TISSUES AS SODIUM-CAESIUM-BISMUTH-NITRITE.—By Mr. E. A. Doisy.

The insolubility of sodium-caesium-bismuth-nitrite, previously described by Ball,<sup>1</sup> was utilized in the development of a method for the determination of sodium in tissues.

The organic matter is oxidized by a wet ash process with a mixture of nitric and sulfuric acids. Iron must be removed from the mixture of blood salts. The solution is made faintly alkaline to methyl orange and evaporated to 2 or 3 c.c. One-half c.c. of 2 N HNO<sub>3</sub> and an excess of reagent are added. After standing two days under illuminating gas, the precipitate is filtered off on a previously weighed Gooch. The reagent is removed by washing with acetone. The Gooch is dried at 100 F. and weighed.

Since the insoluble salt is a nitrite it may be estimated by titration with potassium permanganate. One molecule requires 30 atoms of oxygen for oxidation.

The precipitate contains 3.675 per cent. of sodium. One mg. of sodium yields 27.2 mg. of the insoluble nitrite which requires 4.37 c.c. of N/10 K MnO<sub>4</sub> for complete oxidation.

The reagent is made from caesium nitrate, bismuth nitrate, and potassium nitrite. Any insoluble matter which forms is dissolved by the addition of a little dilute nitric acid.

Good results were obtained in the determination of known amounts of sodium. The proposed method was checked by the indirect perchlorate procedure. Values found agreed closely.

The advantages of the new method are:

1. Speed—much less time is required.
2. Economy—the reagents are very cheap; each determination costs about 0.03.
3. Samples—1 or 2 gm. of tissue will furnish enough sodium for a determination.
4. Accuracy—fully as accurate as any procedure now in use.

1. Ball, W. C.: J. Chem. Soc., 97, 1408, 1910.

## DISCUSSION

DR. SHAFFER: I would just like to add a word of appreciation to the service which I feel Mr. Doisy and Dr. Bell have rendered in perfecting this method for the determination of sodium. I am sure everyone who has ever attempted to determine sodium will appreciate the great difficulty involved. It is not only time consuming, but there are also uncertainties in most of the old methods. This plan of using such a simple substance should be of very great interest and service in biological chemistry.

## 3. INFILTRATION ANESTHESIA OF INTERNAL VESICAL ORIFICE—DEMONSTRATION OF A NEW MEDIUM PROSTATIC BAR EXCISOR.—By Dr. JOHN R. CAULK.

The author presented a new median bar excisor, a modification of the Young's instrument for the removal of median bars and the treatment of the contracture of the vesical neck. The instrument instead of having a knife blade has a cautery blade. This was designed in order to prevent hemorrhage and to lessen absorption, both of which it accomplishes. The chief feature of the presentation was a new method of anesthesia of the bladder neck for such operations. The author has designed a long needle which fits into a holder and with a pistol handle a flange is caught which connects with the long needle and under direct vision through the operating endoscope the bladder neck can be easily infiltrated with 1 per cent. procaine, so that there is not the slightest sensation during the operative manipulations around the orifice. This method of anesthesia is far superior to the old urethral anesthesia.

The author then demonstrated specimens removed by this procedure and reported almost 100 per cent. successes. One patient had a quart of residual urine from a minor obstruction and this was entirely removed by this operation.

He concluded that there is a big field for this type of surgery, about 20 per cent. of all obstructions may be cured by this operation; that careful cystoscopic examination must be done to determine the type of obstruction; that the results following this simple method are as perfect as those following complete prostatectomy and are without hazard.

## 4. A STUDY OF THE BLOOD AND ITS CIRCULATION IN INFANTS SUFFERING FROM NUTRITIONAL DISORDERS.—By Dr. KIRSTEN UTHEIM.

This study has shown that the blood protein in normal infants is about 6 or 6.5 per cent. and that it remains at this level up to the tenth or eleventh month when it begins to rise and that by the fifteenth month it has reached the same level as in adults; that is, about 8 per cent.

Infants suffering from various diseases, with the exception of exudate diathesis, acute diarrhea, or vomiting, and nephritis, show no remarkable change in the blood protein. Infants with acute diarrhea or vomiting have a high percentage of protein associated with increasing concentration of the blood.

Premature infants and athreptic infants show a low protein percentage in blood. Four per cent. is seen in many cases. This condition in premature infants is only an expression of the influence of age and development on the water metabolism of the organism (Bezold). As far as the athreptic infants are concerned, the low protein in some cases seems to be due to lack of power on the part of the organism to build up protein; in other instances to the overfeeding with carbohydrates.



The high water content of the organism in both premature and athreptic infants must be regarded as an important factor in the low immunity they show, thus predisposing these infants to multiple infections very common and often fatal in both instances.

Besides this high water content of the organism, the athreptic babies show a very low rate of blood flow which in some instances is due partly to the diminished blood volume, in other instances to contraction of the peripheral small vessels, an attempt apparently to diminish the blood to the surface area of the body, and thereby the loss of heat from the body. This changes the distribution of the blood to the internal organs. The contraction of the peripheral vessels has been proved by comparing the differences found in the number of corpuscles and the amount of hemoglobin in the capillary and the venous blood. The low blood flow is not accompanied by a lowering of blood pressure because of the following compensatory factors: (1) a diminution of the blood bed by atrophy of the skin, subcutaneous tissue and musculature; (2) the contraction of the small peripheral vessels; (3) possible changes in the alimentary blood vessels (Schiff).

This low rate of blood flow will contribute in lessening the resistance of these infants by depriving the body tissue of the necessary food and in this way contributes to the break down of the body cells.

Experiments on rabbits have shown that during complete starvation with deprivation of fluid, the blood volume goes down below the normal value for the body surface due to water loss from the blood. However, by giving only enough food and water to prevent further loss of weight the blood volume is rapidly restored and quickly reaches a value above normal for the body surface. Four rabbits did not completely regain the normal volume. These were rabbits which did badly and would not gain even if food was given in abundant amount. It is only fair to put the bad condition of these four animals in relation to the low blood volume. When we apply these findings to infants we can see that in athreptic infants who show a lowering of blood volume all the above mentioned factors will still further affect the organism and all factors will work together in lowering the oxidizing power of the body cells and in breaking down the organism.

#### CONCLUSION

1. Premature and athreptic babies show a high water content in the body, a factor which explains the low immunity of these babies.
2. The blood flow of athreptic babies is found to be very low, a fact which contributes to explain the poor condition of these babies.
3. The low blood flow is not accompanied by a drop in blood pressure.
4. In experiments on rabbits it is shown that the blood volume during complete starvation drops below the normal mainly due to loss of water from the body with a rapid increase to above the normal value by giving food and water only enough to prevent further weight loss.

#### DISCUSSION

DR. MARRIOTT: I want to express my appreciation for the excellent work that Dr. Uthman has done. The whole paper is too long to discuss but there are two or three points to be emphasized. I think one of the most interesting ones is the fact that it has been possible by simple processes of starvation, to duplicate in animals a condition similar to that seen in infants suffering from what is known as nutritional disorders. There have been various causes assigned to these disorders. Certainly, they are not always due to the same thing. It has been a rece-  
t

idea that a condition known as marasmus is due largely to starvation rather than any other cause. The fact that in these animals it was possible to reproduce this condition gives additional weight to the idea.

## BOOK REVIEWS

HEREDITY AND ENVIRONMENT IN THE DEVELOPMENT OF MEN. By Edwin Grant Conklin, Professor of Biology in Princeton University. Princeton University Press, Princeton. London: Humphrey Milford. Oxford University Press, 1919.

The ground plan of this fascinating book was laid when the author delivered the N. W. Harris Lectures in February, 1914, at Northwestern University. Two previous editions have been exhausted and the opportunity offered by the publication of a third edition has been used to revise the material thoroughly.

The biological studies of Darwin, the inheritance scheme of Mendel, the work of Galton, are thoroughly discussed and as one progresses through the discussion of the phenomena of development of body and mind and the factors involved to the phenomena of inheritance, the influence of environment, and the possibilities of control of heredity, there is a deep sense of conviction that Darwin and Mendel gave to the world the most solid foundation for an understanding of the facts of nature. We are fond of believing that acquired characteristics may be transmitted but the cold logic of these lectures confirms the statements of Darwin to the contrary.

The popular expression "blood will tell" is fully justified and one loves Dr. O. W. Holmes more for saying that "if one desires to be great in mind and body he should be extremely careful in the selection of ancestors for at least two or three generations back." Selective breeding constitutes the only method of improving the human race just as certainly among humans as among animals and birds. The elimination of the unfit is one factor in the production of a better breed of humans but we have made no progress within historical times.

One may have many delightful evenings in reading these lectures for they stimulate reflection to a marked degree.

M. A. B.

LABORATORY MANUAL OF PHARMACOLOGY. Including Materia Medica, Pharmacopoeias and Pharmacodynamics. By A. D. Bush, B.Sc., M.D., Professor of Pharmacology, University of North Dakota. Illustrated with full page plates, many in colors. Philadelphia: F. A. Davis Company, 1919. Price, \$3.50 net.

In these days, when therapeutic nihilism and obsessed rationalists hold the center of the arena, it is a delectable experience indeed to peruse a compendium of pharmacology such as the one before us. Through the arrangement of his subject matter, accompanied by lucid and artistically chosen illustrations, the author has succeeded in projecting a work in which is clearly evidenced fixity of purpose, originality of conception, and logical motivation. This manual makes a strong bid to induce concentration on the student's part and retentiveness for the future; not an easy task in pharmacology. A reading of the author's introduction imbues one with confidence that what is to follow has been compiled by one who knows what he is about, as well as what is needed in the laboratory of pharmacology. We fancy particularly the opportunity which the student is given in this work to note the results of his own observations during investigations; an excellent nucleus for the research man of the future. Since the author makes no pretense at offering an exhaustive treatise we will condone what we

consider in several instances sacrifices made toward obtaining conciseness. This manual should commend itself highly to all professors of pharmacology and their students, to practitioners (and they surely must be numerous) in need of rehabilitation of their cobwebby storehouses of therapeutics and pharmacology, and particularly to the vilifiers of the science of therapeutics, who sit in the scorner's seat and hurl the cynic's ban at each and every therapeutic agent that is not in some way related to a germ or to a vaccine. This manual is the best of its kind that has come to our attention, and should be accorded the enthusiastic reception which it so well deserves.

W. H. T.

1918 COLLECTED PAPERS OF THE MAYO CLINIC, Rochester, Minn. Octavo of 1196 pages, 442 illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, \$8.50 net.

Like the previous volumes, these papers have already been published in medical periodicals and the material covers much of the field of medicine, practical and experimental.

The alimentary canal receives considerable attention. Some of the rarer conditions (polyposis of the stomach and torsion of epiploical appendices) are considered, but the subjects are mainly those which are apt to confront the surgeon at any time. The papers possess the uniform excellency of the work at the Mayo Clinic and are of great value for immediate reading as well as for reference. An author's index, a biographical index, and a splendid index of subjects, which are found at the end of the book, enhance its value for reference purposes. R. E. S.

HANDBOOK OF DISEASES OF THE RECTUM. By Louis J. Hirschman, M.D., F.A.C.S., vice chairman, Section on Gastro-Enterology and Proctology, A. M. A. With 223 illustrations, mostly original, and 4 colored plates. Third edition revised and rewritten. St. Louis: C. V. Mosby Company, 1920. Price, \$5.

This work has already been recognized as a standard treatise on diseases of the rectum and the author has succeeded admirably in his efforts to simplify and clarify the technicalities of rectal surgery. In this third edition he has added a large number of illustrations. In the chapter on Constipation and Obstipation he has entered into a consideration of the entire colon and has justly emphasized the physiology of defecation as a basis for rational treatment. The book is to be recommended to students and practitioners of medicine. H. W. S.

HYGIENE AND PUBLIC HEALTH. By George M. Price, M.D., Director, Joint Board of Sanitary Control. Second edition, thoroughly revised. Philadelphia and New York: Lea and Febiger. Price, \$1.50.

An excellent handbook for everyone interested in hygiene and public health questions. The author has condensed into small compass the most important facts concerning preventable diseases, hygiene and sanitation and presented them in a very readable and understandable manner.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1920, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

BARBITAL-CHIRIS.—A brand of barbitol (see New and Nonofficial Remedies, 1920, p. 82) complying with the N. N. R. standards. Antoine Chiris Co., New York.

BARBITAL SODIUM-CHIRIS.—A brand of barbitol sodium (see New and Nonofficial Remedies, 1920, p. 83) complying with the N. N. R. standards. Antoine Chiris Co., New York.

CONDENSED VITALATE.—A pure culture of *Bacillus bulgaricus*. It is designed for internal administration (see general article, Lactic Acid-Producing Organisms and Preparations, New and Nonofficial Remedies, 1920, p. 156). The preparation is distributed by the manufacturer only. Vitalate Laboratories of California, Pasadena, Calif. (*Jour. A. M. A.*, April 3, 1920, p. 851).

ELIXIR BARBITAL SODIUM-ABBOTT.—Each fluidounce contains barbitol sodium-Abbott (see New and Nonofficial Remedies, 1920, p. 84), 20 grains. Abbott Laboratories, Chicago.

AROMATIC CHLORAZENE POWDER.—A powder composed of Chlorazene (see New and Nonofficial Remedies, 1920, p. 137), 5 per cent.; sodium bicarbonate, 5 per cent.; eucalyptol, 2 per cent.; saccharin, 1 per cent.; and sodium chloride, 87 per cent. Abbott Laboratories, Chicago.

CAPSULES CORPORA LUTEA DESICCATED-HOLLISTER-WILSON 2 GRAINS.—Each capsule contains desiccated corpus luteum-Hollister-Wilson (see New and Nonofficial Remedies, 1920, p. 204), 2 grains.

CAPSULES CORPORA LUTEA DESICCATED-HOLLISTER-WILSON 5 GRAINS.—Each capsule contains desiccated corpus luteum-Hollister-Wilson (see New and Nonofficial Remedies, 1920, p. 204), 5 grains.

TABLETS CORPUS LUTEUM DESICCATED-HOLLISTER-WILSON 2 GRAINS.—Each tablet contains desiccated corpus luteum-Hollister-Wilson (see New and Nonofficial Remedies, 1920, p. 204), 2 grains.

TABLETS CORPUS LUTEUM DESICCATED-HOLLISTER-WILSON 5 GRAINS.—Each tablet contains desiccated corpus luteum-Hollister-Wilson (see New and Nonofficial Remedies, 1920, p. 204), 5 grains. The Hollister-Wilson Laboratories, Chicago.

SCHICK TEST-GILLILAND.—Marketed in packages containing a capillary tube of diphtheria toxin (standardized) and in vial of diluent, and in packages containing four tubes of diphtheria toxin and four vials of diluent. See Diphtheria Immunity Test (Schick Test), New and Nonofficial Remedies, 1920, p. 304. Gilliland Laboratories, Ambler, Pa.

CORPORA LUTEA SOLUBLE EXTRACT-HOLLISTER-WILSON.—A sterile solution of those constituents of corpus luteum which are soluble in physiological solution of sodium chloride, containing in each Cc. 0.02 Gm. of soluble matter in addition to sodium chloride and chlorbutanol (as a preservative). For a discussion of actions and uses, see general article on Ovary, New and Nonofficial Remedies, 1920, p. 201. It is marketed in the form of Ampoules Corpora Lutea Soluble Extract-Hollister-Wilson 1 Cc., Hollister-Wilson Laboratories, Chicago.

EUCATROPINE. — Euphthalmine. Phenyl - Glycolyl - Methyl-Vinyl-Diacetonalkamine Hydrochloride. Eucatropine was first introduced as Euphthalmine. It produces prompt mydriasis, free from anesthetic action, pain, corneal irritation, or increase in intra-ocular tension. The effect on accommodation is slight and transient. Eucatropine is useful as an aid in ophthalmoscopic examinations in place of atropin, homatropine, etc.



**EUCATROPINE-WERNER.**—A brand of eucatropine complying with the N. N. R. standards. Werner Drug and Chemical Company, Cincinnati, Ohio (*Jour. A. M. A.*, May 1, 1920, p. 1231).

**PITUITOL OBSTETRICAL.**—Pituitary Extract Obstetrical-Hollister-Wilson. An extract of the posterior lobe of the pituitary body of cattle, approximately three times the strength of Solution of Hypophysis, U. S. P., preserved by the addition of chlorbutanol. It is standardized according to the method of G. B. Roth. For actions and uses, see general article, Pituitary Gland, New and Nonofficial Remedies, 1920, p. 205. Marketed in the form of Ampoules Pituitol Obstetrical 0.5 Cc. and Ampoules Pituitol Obstetrical 1 Cc. Hollister-Wilson Laboratories, Chicago.

**PITUITOL SURGICAL.**—Pituitary Extract Surgical-Hollister-Wilson. An extract of the posterior lobe of the pituitary body of cattle, approximately six times the strength of Solution of Hypophysis, U. S. P., preserved by the addition of chlorbutanol. It is standardized according to the method of G. B. Roth. For actions and uses, see general article, Pituitary Gland, New and Nonofficial Remedies, 1920, p. 205. Marketed in the form of Ampoules Pituitol Surgical 1 Cc. Hollister-Wilson Laboratories, Chicago.

**RADIUM BROMIDE, RADIO CHEMICAL CORP.**—Supplied in the form of a mixture of radium bromide and barium bromide. All deliveries are made subject to the tests of the U. S. Bureau of Standards. Radio Chemical Corporation, New York.

**RADIUM CARBONATE, RADIO CHEMICAL CORP.**—Supplied in the form of a mixture of radium carbonate and barium carbonate. All deliveries are made subject to the tests of the U. S. Bureau of Standards. Radio Chemical Corporation, New York.

**RADIUM CHLORIDE, RADIO CHEMICAL CORP.**—Supplied in the form of a mixture of radium chloride and barium chloride. All deliveries are made subject to the tests of the U. S. Bureau of Standards. Radio Chemical Corporation, New York.

**RADIUM SULPHATE, RADIO CHEMICAL CORP.**—Supplied in the form of a mixture of radium sulphate and barium sulphate. All deliveries are made subject to the tests of the U. S. Bureau of Standards. Radio Chemical Corporation, New York (*Jour. A. M. A.*, May 8, 1920, p. 1316).

**ACETYSALICYLIC ACID-HEYDEN.**—A brand of acetylsalicylic acid (see New and Nonofficial Remedies, 1920, p. 247) complying with the N. N. R. standards. Heyden Chemical Works, Garfield, N. J. (*Jour. A. M. A.*, May 22, 1920, p. 1457).

**STREPTOCOCCUS VACCINE (GILLILAND).**—A streptococcus vaccine (see New and Nonofficial Remedies, 1920, p. 290) made from hemolytic streptococci, viridans (green-producing) streptococci and nonhemolytic streptococci. Marketed in packages of four syringes in packages of four 1 Cc. ampoules and also in vials of 5, 10 and 20 Cc. The Gilliland Laboratories, Ambler, Pa.

**TABLETS DICHLORAMINE-T, 4.6 GRAINS.**—Each tablet contains 4.6 grains of dichloramine-T-Abbott (see New and Nonofficial Remedies, 1920, p. 139). Abbott Laboratories, Chicago.

**SOLUTION ARSPHENAMINE-LOWY.**—An aqueous 0.5 per cent. solution of arsphenamine possessing the proper degree of alkalinity. It is supplied in ampoules containing 80 Cc. and 120 Cc., respectively, each being provided with a hypodermic needle and attachment for intravenous administration. The ampoules are provided with an expiration date after which time they

should not be used, and with a color standard to which they must conform. The solution is made from the particular brand of arsphenamine selected by the purchaser. Lowy Laboratory, Inc., Newark, N. J. (*Jour. A. M. A.*, May 29, 1920, p. 1519).

## PROPAGANDA FOR REFORM

**DETERIORATION OF OUABAIN (CRYSTALLINE STROPHANTHIN) SOLUTIONS.**—Levy and Cullen, having observed wider variation in the potency of several lots of ouabain furnished in ampoules, found that the sterilized solutions were decidedly alkaline in reaction, whereas freshly prepared aqueous solutions of the drug were neutral or slightly acid. Since ouabain (crystallized strophanthin) is readily rendered biologically inert by heating with alkali, the authors ascribe the deterioration of the solutions to alkali derived from the soft glass from which ampoules are often made. The deterioration may be averted by the use of containers of hard glass (*Jour. A. M. A.*, April 3, 1920, p. 955).

**ANTI-TUBERCULOUS LYMPH COMPOUND (SWEENEY).**—This is put out by the National Laboratories of Pittsburgh, Dr. Gilliford B. Sweeney, "Medical Director." Just how Anti-Tuberculous Lymph Compound is made today is not stated. It is fair to assume that it is not made in such a manner as to bring it under the federal laws governing the sale of serums and similar preparations. The claims made for the preparation are uncritical and unscientific, mainly of the testimonial class. When some of these testimonials were investigated, every physician who answered the inquiry regarding his previous and present opinion declared in effect that he had long since ceased to have faith in the value of the preparation. The facts are that no serum or lymph has thus far been proved to have any value in the treatment of tuberculosis. Having examined the available evidence, the Council on Pharmacy and Chemistry declared Anti-Tuberculous Lymph Compound (Sweeney) not acceptable for New and Nonofficial Remedies (*Jour. A. M. A.*, April 3, 1920, p. 965).

**ANTI-SYPHILITIC LYMPH COMPOUND (SWEENEY).**—This preparation is made by or under the direction of Dr. Gilliford B. Sweeney, whose researches (?) led to the production of Anti-Tuberculous Lymph Compound (Sweeney). According to the available information, this preparation is made by suspending benzoate of mercury in lymph from the bullock. The circular exploiting this preparation makes the statement that it is seldom necessary to continue the treatment beyond two months. If one chooses to be credulous, this would indicate extraordinary power for the mercury. That any physician could be induced to place his trust in this preparation is almost unthinkable. The Council on Pharmacy and Chemistry declared Anti-Syphilitic Lymph Compound (Sweeney) not acceptable for New and Nonofficial Remedies (*Jour. A. M. A.*, April 3, 1920, p. 966).

**PHARMACEUTICAL HOUSES AND THE COUNCIL ON PHARMACY AND CHEMISTRY.**—In no one direction has the Council made greater efforts than in its endeavors to secure the fullest cooperation of the various pharmaceutical houses. The difficulty has been, and always must be, the fundamental antagonism between objectives that are largely commercial, on the one hand, and purely scientific, on the other. Nevertheless, the Council has always believed that there is a possible middle ground wherein the interests of therapeutics would not be injured, but would go hand in hand with commercial development based on enlightened self-interest. The Council has practically the undivided support of manufacturers of medicinal chemicals; but pharmaceutical firms which find it profitable to promote specialties—unscientific or ordinary mixtures of pharmaceutical or biologic products sold under trade names

—have not supported the Council. The methods of the pseudochemical companies, whose sales propaganda in the interests of unscientific nostrums with its attending damage to scientific medicine had led to the establishment of the Council, has found their lodgment in most of the pharmaceutical houses. Is it any wonder that such firms are antagonistic to the work of the Council? When the medical profession as a unit will support the Council in its work, then such firms will find it good business policy to market products which are eligible for New and Nonofficial Remedies, but not before. The Council, constituted of scientific men working without remuneration in the interest of scientific medicine and the medical profession, expects—and rightfully—the cooperation and support of the members of that profession. What is needed is the active, sympathetic cooperation of physicians; the cooperation of pharmaceutical houses will follow as a matter of course (*Jour. A. M. A.*, May 1, 1920, p. 1234).

**SOME MISBRANDED DRUG PRODUCTS AND NOSTRUMS.**—The following products have been subject to prosecution by the federal authorities under the Food and Drug Act: Quinin Sulphate Tablets and Calomel Tablets of the Drug Products Company, New York City, did not contain the amount of drug claimed. Acetphenetidin and Salol Tablets of the Carrol Dunham Smith Pharmacal Co., New York City, did not contain the amount of drugs claimed. Hostelley's Hypophosphites and Hostelley's Chemically Pure Hypophosphites were adulterated and misbranded. Stoddard's Pinus-Codeia, Salcetol-Codeia Tablets, Salcetol Phenylamine Ammonii Salicylate Tablets, Salcetol Co. No. 2 Infant Corrective Tablets, Cannabin Co. Tablets, G. S. Stoddard & Co., New York City, were misbranded. Dr. King's Star Crown Brand Pills were sold under false therapeutic claims. Marshall's Pain Drops, Marshall's Lung Syrup, Dr. J. C. Brown's Unequaled Liquid Drops, Marshall's Blood and Liver Pills, Egyptian Oil, and Arctic Oil Liniment of the M. W. Marshall Medicine Co. were sold under false therapeutic claims (*Jour. A. M. A.*, May 1, 1920, p. 1269).

**MORE MISBRANDED NOSTRUMS.**—The following "patent" medicines have been the subject of prosecution by the federal authorities because they were sold under false claims: Seelye's Ner-Vena, a syrup containing alcohol and vegetable extractives, among which were those of juniper, wild cherry, senna, gentian, sassafras, uva ursi and cinchona; Hill's Rheumatic Pills, consisting of vegetable extracts, including aloes, and 5 per cent. of mineral salts; Jenkin's Rheumatism, Gout and Neuralgia Annihilator, containing over 46 per cent. alcohol, salicylic acid, resinous plant extract and water. Short Stop, a syrup containing licorice and wild cherry extract, ammonium carbonate, small amounts of an antimony salt, benzoic acid, camphor, oil of anise and traces of an alkaloid. Antiseptine, a powder composed essentially of anhydrous zinc sulphate and lead acetate together with a small amount of copper acetate. Cassidy's 4X, consisting essentially of aloes, colocynth, resins, and a small amount of a mercury salt, alcohol and water. "P. G. S." (Schuh Drug Co.), consisting of plant extract, including extract from a laxative drug, resin, and not more than a trace, if any, of mercury, alcohol and water. Red Cross Pile Cure, suppositories consisting essentially of cocoa butter, tannin, menthol, a lead compound, iodid, sulphate and possibly acetate (*Jour. A. M. A.*, May 22, 1920, p. 1473).

**PROPRIETARY VS. NONPROPRIETARY.**—The exhibit of the A. M. A. Chemical Laboratory at the recent New Orleans Session of the A. M. A. contained a card comparing the cost of drugs sold under proprietary and

nonproprietary names. The following list compared the wholesale price per ounce of drugs sold under protected (proprietary) names with the same drug sold under a common (nonproprietary) name: Aspirin-Bayer, \$0.85; acetylsalicylic acid, \$0.16. Phenacetin, \$0.65; acetphenetidin, \$0.27. Atophan, \$3.50; cinchophen, \$2.00. Kelene (10 gm.), \$0.56; ethyl chloride (10 gm.), \$0.45. Duotal, \$1.90; guaiacol carbonate, \$0.80. Urotropin, \$0.60; hexamethylenamine, \$0.21. Sulphonal, \$1.70; sulphonmethane, \$0.80. Trional, \$1.90; sulphon-thyl-methane, \$1.00. Diuretin, \$1.75; theobromine-sodium salicylate, \$0.70. Aristol, \$1.80; thymol iodide, \$1.00. Economy as well as scientific prescribing demands the use of nonproprietary names whenever possible (*Jour. A. M. A.*, May 22, 1920, p. 1473).

**COTTON PROCESS ETHER.**—The Du Pont Chemical Works have decided to present "Cotton Process Ether" to the Council on Pharmacy and Chemistry for consideration, and the ether will be thus defined: An improved anesthesia ether consisting of highly refined diethyl oxid with approximately two volumes of ethylene, one-half volume carbon dioxid and 1 per cent. by weight of ethyl alcohol (*Jour. A. M. A.*, May 22, 1920, p. 1474).

**FUMES OF IODIN.**—For some time manufacturers have urged substitutes for tincture of iodine, claiming that the substitutes were free from the undesirable properties of the tincture and at the same time possessed special virtues which the tincture could not possess. More recently, attention has been directed to the administration of iodine in the form of vapor. Luckhardt reports that they are rapidly and completely absorbed. It was found that the administration of iodine through the respiratory passages even in small quantities is fraught with great danger. Such administration induces dyspnea, and when it is given in large quantities, acute and fatal pulmonary edema ensues within twenty-four hours. When respiratory disorders are present at the time of the administration, the fatal edema supervenes very quickly (*Jour. A. M. A.*, May 29, 1920, p. 1521).

**THE SHORT AND CATCHY NAME.**—A laborer went to a Brooklyn physician for treatment and was given three prescriptions. One of the prescriptions called for "Laxol," the word being written on a piece of blank paper without directions. The drug clerk misread the prescription and dispensed an "original" bottle of "Lysol," which bore the usual poison label. The man drank the entire three ounces of "Lysol" and died. Laxol is a flavored and sweetened castor oil, and there is no excuse for prescribing it (*Jour. A. M. A.*, May 29, 1920, p. 1524).

**HOSTETTER'S BITTERS.**—Hostetter's Celebrated Stomach Bitters is declared to contain 25 per cent. of alcohol. Analyses in the past have shown that the alcohol content has varied widely at different times, the amount having never been less than 25 per cent. by volume, but sometimes as high as 43 per cent. A recent analysis by the A. M. A. chemists showed 24.72 per cent. of alcohol by volume, small quantities of cinchona alkaloids (about  $\frac{3}{4}$  grain per fluidounce) and no other therapeutically active ingredients in appreciable quantities. Six fluidounces of the preparation (6 doses) were dealcoholized, the solution evaporated, the residue mixed with milk sugar, the mixture placed in capsules, and the capsules swallowed at one dose by a healthy man. No effects were noted. It is evident that alcohol is by far the most active ingredient in Hostetter's Stomach Bitters. The analysis failed to reveal the presence of any drugs in quantities that would prevent the preparation's being used as a beverage (*Jour. A. M. A.*, May 29, 1920, p. 1534).



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### ORIGINAL ARTICLES

#### **PATHOLOGY AND SURGICAL TREATMENT OF PERIPHERAL NERVE INJURIES\***

R. D. IRLAND, M.D.  
KANSAS CITY, MO.

It has been my privilege to observe the management of peripheral nerve injuries in the service of Col. Dean D. Lewis and Major L. J. Pollack at the U. S. Army General Hospital No. 28, Fort Sheridan, Ill., where approximately 500 cases of this type were treated within the past year. The following remarks are based on this experience.

The present interest in this subject grows out of the remarkably large number of these cases that recently have been treated by capable workers in the war wounds; but it is my belief that it deserves more serious attention than it has previously received from the average general surgeon.

The recognition and proper treatment of nerve injury in traumatisms encountered in industrial surgery would amazingly increase the degree of success we have been accustomed to expect from our efforts to restore function to the injured limbs. Though it may be said that the subject is of such narrow application in the ordinary civil practice as to make it of little value to the average worker, it seems to me quite justifiable to ask the attention of this Association to it.

By reason of the great amount of clinical and experimental work done in this subject during the war, several old faulty ideas regarding the pathology of peripheral nerve lesions have been eliminated; and with a clearing up of our ideas concerning the pathology, operative procedures have been placed on a much more rational basis than they have hitherto enjoyed.

The scope of this paper is limited to pathology and surgical treatment. The neurologic aspect of these cases has been ably presented to you by Dr. Robinson. It is found that the more

precise methods of determining the extent to which any nerve or group of nerves may be injured calls for a type of skill and specialized training which the average surgeon does not possess; and I should like therefore to emphasize the importance of having these cases carefully examined by a competent neurologist. Perhaps in no other class of cases is the co-operation of a related specialist so insistently demanded. Casual view of the extent to which a nerve has been injured is very likely to be erroneous because of the peculiar overlapping of sensory function. Pollack has carefully charted these areas of overlapping and they must be learned and remembered if we are to avoid error in diagnosis. So that if in the beginning I may impress on you the very great importance of a competent neurologic examination of all these injuries before any surgical intervention is employed, we shall have made a considerable advance.

Another point that must be insisted upon is that prompt suture of a divided nerve trunk is unquestionably a good procedure. Nothing is lost and much may be gained. In injuries where the nerve trunks might be involved they should be searched for and their condition noted; and if any surgical treatment is clearly needed it should be given at the time. In the event of failure to restore function nothing has been lost and the patient is no worse off than he would have been had the nerve lesion been ignored in the first place.

In making a diagnosis of peripheral nerve division we must differentiate between the anatomic and the physiologic interruption of nerve impulses. Experience in war injuries shows that a large proportion of traumatic paralyses spontaneously recovered. Which fact makes it imperative that in the event it cannot be definitely established that there is an anatomic interruption of impulse condition, one should wait a number of months before undertaking any operative treatment. Many of these spontaneous recoveries of functional interruption have taken place after nine months or more have elapsed; so that one should not be unduly hasty in employing surgical measures in cases where the actual anatomic interruption of im-

\* Read at the Sixty-Third Annual Meeting of the Missouri State Medical Association, Jefferson City, April 6-8, 1920.

pulse conduction is in doubt. An exploratory operation could of course be undertaken and the nature of the pathologic process determined but sometimes it is not easy to determine that the injury will produce a complete and persistent interruption of impulses. It is perhaps a much better plan to wait a few months or even a year in the hope that function will return. It is possible for scar tissue so to compress a nerve trunk as to interrupt impulses without destroying the neurofibrils distal to the point of compression. The amount of scar tissue capable of producing this effect is extremely variable. In one case I have seen a small band like a piece of catgut compress the trunk of the radial nerve and cause a complete radial paralysis. Or, the nerve may be compressed through the space of several inches by dense scar tissue which is so closely adherent to the trunk that its resection requires the removal of a part of the epineurium. The great difference between physiologic and anatomic interruption lies in the fact that in the former class there is no degeneration of the neurofibrils distal to the point of interruption. Clinically, these cases are distinguished by the rapidity of recovery of function after the scar is removed. In several cases which have come under my immediate observation recovery has occurred in eight or ten days.

In anatomic division we usually will find a neuroma on the distal end of the proximal segment. If the division of the trunk is not complete there will be a lateral neuroma growing on the distal end of the proximal segment of the divided portion of the trunk. Likewise, there is commonly a pseudoneuroma formed on the proximal end of the distal segment. In some cases this pseudoneuroma does not appear. Another point of differentiation is that in anatomic division there is never any spontaneous pain along the course of the distal segment. The extent and character of anatomic interruption is varied within wide limits. Sometimes it is the result of a contusion which has produced sufficient scar tissue within the epineurium as to prevent the down growth of neurofibrils from the proximal stumps. Sometimes there is complete division without any appreciable destruction of nerve substance. At other times the trunk is destroyed for a considerable extent. In the cases I have seen there has been destroyed as much as 2.5 to 3 inches of the nerve trunk.

An understanding of the mechanism of nerve regeneration must be predicated by an understanding of the mechanism of degeneration of the distal segment. At the time when the neurofibrils are divided the degeneration of the distal segment begins. This process was described long ago and has been known as Wallerian degeneration. It is characterized by a preliminary stage of fragmentation and granular degeneration of the neurofibrils with their gradual disappearance. The myelin sheath divides into fat

globules of varying size which gradually disappear. The significant feature of the degeneration of peripheral nerve lies in the hyperplasia of the cells of the sheath of Schwann. There is an active nuclear proliferation with the development of protoplasmic bands which persist for a long time and as we shall see later play a very important rôle in the process of regeneration of the nerve. Some observers have declared that the regeneration of neurofibrils takes place in the distal segment of a cut nerve without having reestablished a connection with the proximal segment. This does not occur. The statement is the result of incorrect interpretation of the development of the protoplasmic bands to which we have just referred. There can be no regeneration of the distal segment except by the growing down into it of neurofibrils from the proximal stump; for a nerve process must maintain its connection with the central or ganglion cell that produces it if its integrity and function are to be retained. The sheaths of the distal segment after having developed the protoplasmic bands seem to be necessary to the process of neurofibril regeneration; they seem to exert a sort of chemotactic influence on the fibrils which grow down into the distal segment seeking out these bands, which in turn undergo a reversal of the processes of degeneration and ultimately regenerate new myelin and new sheaths of Schwann. It is believed by Lewis and Huber, who have done much important experimental work in this field, that it is the absence of sheaths of Schwann in the spinal cord and the optic nerve that makes impossible the regeneration of divided or destroyed fibers in these portions of the nervous system.

In considering operative treatment of peripheral nerves when there has been a complete or partial anatomic division, there is only one type of operation that is most likely to achieve success, that is end to end suture. The operation must be done with exceedingly great care and painstaking attention to the essential details. In the first place it is absolutely necessary that all of the scar tissue that has formed in the nerve trunks be resected, as scar tissue is an insuperable barrier to the down growth of neurofibrils. The neuroma on the proximal segment and the nerve on the proximal side of it are resected until the neurofibrils herniate from the cut surface. The same thing is done to the distal segment. It is sometimes astonishing to find how far the scar tissue extends into the nerve trunk. A small, thin, sharp blade is necessary to avoid bruising and laceration. Safety razor blades are very good for this purpose.

Another requirement is that a dry field be maintained. If there is any hemorrhage it must be absolutely controlled; as blood left in the tissue will only produce scar and scar is the thing we are most anxious to eliminate, as it



is the most serious barrier the neurofibrils can have to surmount. On section the nerve trunks themselves may bleed. This is especially true of the large trunks like the sciatic or the radial. Sometimes this bleeding can be stopped by a fine hemostat carefully placed on the bleeding vessel. In other instances where that is not possible a piece of cut muscle covering the cut end of the nerve usually controls the hemorrhage. But it must be stopped before suture is attempted as a clot in the suture line would block the down growth of the neurofibrils and defeat the object of the operation.

The nerve should be handled as little as possible, and it is important that no axial rotation of the segment be permitted. The reason for this injunction lies in the fact that the matter of the internal topography of the neurofibrillar bundles may be of considerable importance. Possibly what has been said on this subject is not of so much importance as the observers seem to think it is; but nevertheless it is only common sense to attempt to suture the nerve ends in as nearly their normal relationship as it is possible to do. Therefore every effort is made to prevent axial rotation.

The suture material may be fine catgut or fine silk. If silk it should be waxed. It does not seem to make a great deal of difference just how the sutures are placed. The point to be borne in mind is that the epineurium should be so completely closed as to prevent the growth of the neurofibrils outside of the line of suture. This usually is quite easy to do. The sutures which unite the cut ends of the nerve may include just the epineurium, or they may include a greater bulk of the nerve. If a fine round needle is used it will find its way between the nerve bundles rather than injure the fibrils. Care must be taken to avoid tension lest the sutures pull through and tear epineurium and fibrils. A rather remarkable finding is that the distal segment of the nerve trunk does not atrophy and this of course reduces the difficulty of an end to end suture.

It is surprising to find how wide a defect can be treated by this method of end to end suture if we employ all the means at our command to overcome the deficiency. The largest defect overcome in this manner that I personally know anything about was 7.5 cm. in a high explosive shell wound of the sciatic. This was bridged by a complete mobilization of the nerve from the sciatic notch to well beyond the point where the trunk divided into its terminal branches, and by a marked flexion of the knee. The limb was held in a plaster cast for about four weeks; at the end of that time the cast was removed and gradual extension of the leg during the period of about four weeks was accomplished without any subjective or objective difficulty. Defects of the external popliteal, especially where it passes around the head of the fibula, are hard to

bridge. It is not so difficult to overcome defects in the ulnar below or near the elbow up to 2.5 to 5 cm. By dissecting the nerve from its bed behind the inner epitrochlea and bringing it around in front, and either letting it lie beneath the skin, or, what is probably better, carrying it beneath the group of epitrochlear muscles; then with flexion of the elbow suture can be accomplished without tension. Deficiencies in the median and ulnar above the elbow are difficult to bridge unless they are near the axilla when by extension of the arm above the head and flexion of the forearm on the arm with adduction of the arm, bridging becomes possible. In one case that came under my observation this was done successfully and nine months after the suture was done the median had recovered motor and sensory function.

The dissection of a nerve trunk from its bed for purposes of mobilization does not seem to interfere with its nutrition. This objection is urged by some operators; but in the opinion of Lewis and Frazier, who have had a great deal of this work to do since the war began, it is not of so much importance as it has formerly been thought to be; and it is now done in order to enable the operator to do end to end suture rather than to employ one of the less satisfactory modes of reconstruction of the continuity of the nerve trunk.

Something must be said respecting those injuries in which the defect cannot be bridged after the manner just described sufficiently as to permit of an end to end approximation without tension. In the first place let us say that no "flap" operation is to be done; for they are not and cannot be successful. It has been clearly demonstrated that flap operations are to be discarded without consideration. The next best thing to do is to make an autocable-transplant. Autotransplants do very well; very much better than homotransplants or heterotransplants. The nerves which are available for the purpose of making cable transplants are the less important sensory nerves. These small nerves are removed to the extent needed, cut up in segments of the proper length, the segments bound together in a cable, and the cable sutured into the defect after the same manner in which end to end anastomosis is done. In a very short while after the operation they produce a new epineurium and do very well as a substitute for end to end suture. It does not seem to be necessary that degeneration of the sheaths in such a transplant takes place before regrowth of the neurofibrils, though it is possible. However, perhaps the experimental work done in examining this problem has not been sufficiently extensive up to the present time as to enable us to speak with authority on this point. As was said, homotransplant is not so good as autotransplant. A peculiar thing about the heterotransplant is that it dies; but the neurofibrils grow down outside

of it and seek the sheaths of the distal segment. In view of the fact that the autotransplants are so very much more efficient and that there is sufficient material available in almost every case where it is needed, it seems that one should not attempt to use either the homotransplant or heterotransplant.

Lateral implantation of the distal segment of an interrupted motor nerve into an intact sensory nerve or into another motor nerve, has been suggested and done with some degree of success. Paralysis of the facial nerve is a favorite place where this is tried. The nerve chosen to supply the neurofibrils is the hypoglossal or the spinal accessory. Lewis declares that the spinal accessory is very much more satisfactory than the hypoglossal for the reason that the interference with speech which commonly follows disturbance of the hypoglossal function may be a more serious handicap than the deformity arising from paralysis of the facial. The use of the spinal accessory nerve in this sort of a situation has produced excellent results.

The effort to reconstruct an unbridgeable nerve defect by facial tubulization or by tubulization with formalized artery and material of that nature has been made by nearly all workers in peripheral nerve suture; but the reports that come from operations of this type are by no means so satisfactory as those which follow the use of the auto-cable-transplant, and they are to be mentioned only to be condemned.

Regarding the length of time required for the return of function, the observations by different workers vary. It seems fairly well established that neurofibrils will grow 1 to 2 mm. per day. How long it takes to reestablish the connections with the end organs is not known. The radial seems to return fairly promptly, and records of cases that have recovered in four and one-half months are quite authentic. The external popliteal seems to be less prompt than the others. The sciatic seems to be fairly rapid and is probably second to the radial; then follows the median; then the ulnar. A peculiar phenomenon is the rapidity with which full power returns after the first evidence of returning function appears.

The postoperative management of these cases is a matter of immense importance. Rigid splinting is a bad practice. If splints are used at all they should be used for the purpose of giving elastic traction. In that way the opposing muscles will not be stretched and when the regeneration of the nerve has been accomplished the return of function can be observed with the greatest promptitude. The various methods of treatment grouped under the head of physiotherapy are of inestimable value in limiting atrophy, in preventing fibrosis of muscle and in limiting the nutritional disturbances of the skin which can become very annoying. If the mus-

cle changes are permitted to occur to a marked extent, the regeneration of the nerve will avail nothing.

#### SUMMARY

1. Immediate suture is best if complete interruption is proved.
2. If condition of nerve is unknown wait a few months and watch for spontaneous recovery.
3. End to end suture is best. Failing that an auto-cable-transplant is best.
4. Resection of all scar tissue is essential.
5. A dry field must be maintained.
6. Care should be taken to prevent axial rotation.
7. The suture material should be fine catgut or silk, needles very fine and round.
8. The closure of the epineurium must be perfect and enclose all neurofibrils.
9. Rigid splints should not be used at any time.
10. Physiotherapy to prevent atrophy and fibrosis of muscle is of much importance.

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#### DISCUSSION

DR. FRANCIS REDER, St. Louis: We have had two very interesting and instructive papers. Nerve surgery is coming to the fore, and why not? With an abundant material at our hand, more than 3,000 peripheral nerve injuries at present in the hospitals of the United States, the confused ideas with reference to diagnosis and operative measures that have prevailed, and with a Peripheral Nerve Commission appointed by the government, why should not this important topic be of the greatest interest? We, however, miss one of the great masters to whom we were wont to look for an opinion, for an expression that could be regarded by most of us as final, who now lies under the sands of Mesopotamia. I refer to Sir Victor Horsley.

The diagnosis of peripheral nerve injury may be easy or it may be difficult. It depends on both anatomic and physiologic knowledge and, be the nerve division complete or incomplete, the suspected field must be carefully mapped out and the responses, if any, carefully observed. Of course the greatest proof we get in an offhand manner of a nerve injury (I am speaking as a general surgeon) is through the sensory and motor evidence. If we have an incomplete division we can assume that we have an interruption or impairment of conductivity without degeneration of the whole peripheral end. This may be caused by a wound or a partial rupture, and is anatomic; or it may be caused by compression of the nerve by fibrous tissue, extrinsic or intrinsic, by bone, or blood clot, and is physiologic. As far as the electrical tests are concerned, I think the general surgeon had better leave these studies to the neurologist. They are exceedingly delicate and sometimes very misleading, especially when you wish to examine a nerve muscle by means of a condenser discharge.

Tinel's sign, a sensibility test by which regenerative processes in an injured nerve can be frequently demonstrated, is a test of much value. It must, however, not be fully relied on alone, but should be considered in conjunction with the protopathic and epicritic manifestations which may evidence themselves. These three signs will in a fair way indicate whether the regenerative process in the nerve is progressive or



whether it has ceased. Let us dismiss the diagnosis and go over to the surgery.

Some of our foremost nerve surgeons have condensed the surgery of the peripheral nerves down to practically two operations. Dr. Irland has mentioned them; neurolysis, which is the freeing of a nerve from adhesions, and end to end suture. Neurolysis is performed on about 20 per cent. of nerve injuries. It is not always easy to make a decision in favor of neurolysis as against nerve suture. Prompt response to faradic stimulation always speaks in favor of neurolysis. When the end to end suture is accepted as being 80 per cent. and that of nerve grafting about 5 per cent., you can readily see how important it is to effect a junction of the nerve ends. Unfortunately, in end to end suture many failures have come about because the surgeon has shown a hesitancy in making his resections of the ends of the nerve not sufficiently extensive for fear that he will not be able to bring the nerve ends in apposition without tension. Unless the freshened nerve ends show the fasciculi sticking out like minute brush ends, it is needless to undertake the union, because the result will be a failure. You notice what Dr. Irland said about the distal end; that it does not undergo much of a change. That is a very peculiar thing with reference to nerve severance. The moment the nerve is cut it dooms all the axons in the distal portion; there is final death of the neurilemma and the myelin sheath except the nucleus of the myelin sheath cells. These nuclei become congested, multiply, reproduce, and there takes place synchronously with the act of degeneration the beginning act of regeneration in the particular part played by the neurilemma in the regeneration of the cell. Thus, if there is a distal regeneration of the neurilemma and of the myelin sheath before approximation is made, the nerve trunk will retain its full and normal size, but no axis cylinder will be regenerated in the distal portion until the nerve ends are again actually contacted. Every nerve axon is made up of three elements; an axis cylinder, which is the transmission element; a medullary sheath, which is the insulation element; and a neurilemma, which is the reproduction element of the nerve. Every severed nerve that has a neurilemma has in it the potency of regeneration provided the ends are brought in apposition without the interposition of foreign material. In dealing with nerve injuries it is all important to get rid of all scar tissue, whether outside the nerve or within the nerves or between nerve ends. This is absolutely necessary inasmuch as scar tissue will strangle the fasciculi so essential to transmission of impulses after the nerve ends are brought together. If the contact is accomplished in the presence of healthy fasciculi free from the grasp of cicatricial tissue a good result can be looked for even with a clumsy suture.

DR. J. F. MCFADDEN, St. Louis: "Never before in the history of medicine has there been collected for study so remarkable a series of nerve injuries," is a statement made in the year 1864 by Dr. Weir Mitchell, in describing the peripheral nerve conditions arising during the Civil War. I believe I am justified in borrowing that same expression in speaking of the nerve injuries arising from the past war in Europe. You have been told this morning that 500 cases were treated in one hospital in one year, and if you will consider the number of years and the number of hospitals you will realize the large number of these nerves that have been treated not only among our troops and those of our Allies, but also among those of the enemy. We have had wonderful opportunity to examine these cases and some men say we will never again have such an opportunity. I think Dr. Weir Mitchell felt justified in making that remark fifty-six years ago, and in view of that fact I think it behooves us to study the more advanced anatomy,

physiology, pathology and surgery of these nerve injuries and be prepared for the care of them in any future emergency, and also in our civil work.

The question may arise, and naturally I think, of what value is this in civil practice? We may think that now there is no more liability of peripheral nerve injury due to shrapnel and gun bullets; that this is a condition not met with in daily practice; therefore why is it important to the civilian doctor? Intestinal obstruction is not met with every day, but every man who considers himself a surgeon must be prepared to meet that emergency if it arises. If we only study the conditions we meet with in our daily practice as routine and neglect the rest, medicine will suffer, patients will suffer and die on account of ignorance. So I feel that it is up to us to study these conditions and be prepared to handle them as they come up. And these conditions do arise in civil practice. I have seen a number of them since leaving the service. Some are similar to those we met with in the war. One of the first I saw was a young woman whose rejected suitor shot her. The bullet entered the cheek and severed the hypoglossal nerve—absolutely similar to cases we saw in the war. Another case was a young man who had an accident with a shotgun. He suffered an ulnar paralysis and if he had come in to the hospital and told us it was the result of the war we would have believed him. There was absolutely no way of telling. So these are conditions that come up in civil practice. Other conditions you are liable to meet with are in people who come to the hospital perhaps more or less excited, as one case of pneumonia that was delirious. The nurse used anklets and wristlets to restrain the patient. The following morning the patient had an external popliteal paralysis of the type you meet with in your general practice. You may have a man come to you who has had a box fall on his head and shoulders throwing his head on one side and the shoulder down. This will cause a stretching of the brachial plexus and give you peripheral nerve injury. There are cases almost too numerous to mention that will show these conditions in civil practice.

In the treatment we often hear a great deal said about massage and electricity. Perhaps some of us will remember an article in the last issue of *The Journal of the American Medical Association*. In this article I believe they have proven quite conclusively that there has been no advantage gained by massaging the muscles and using electricity following operation in these conditions. They have used control tests and shown that those who did not have massage and electricity recovered equally as well as those that were treated in that way.

Another practical point that I think is worth noting for the surgeon is the formation of a neuroma which is quite frequently made by amputation. We find a neuroma will form and cause a great deal of inconvenience and suffering for the patient. Dr. Huber of Ann Arbor has done some very beautiful work along this line and he has found that the injection of about 1 c.c. of absolute alcohol into the end of the nerve as close to the end as we can get, perhaps 1 cm., will prevent the formation of a neuroma. I think that is a very important point for the surgeon to remember because if you can amputate and prevent a neuroma you will have a grateful patient who will not suffer and perhaps have to have another operation.

DR. MALCOLM A. BLISS, St. Louis: Just two points I want to speak of. I just recently heard Dr. W. H. Rivers of Cambridge, who, with Head, did an experiment in nerve division carried out on Head in 1904-1905, tell us that, when Dr. Head had this nerve cut in his arm and partly sutured under the best surgical conditions, casual examination in the ordinary way would not have disclosed anything at all wrong with

that arm. The point about the thing is that the tests that are made for the finer nerve injuries are frequently valueless unless carried out with the utmost care.

The other point was that Dr. Head told us in New York in 1912 that after he had these nerves cut and sutured it was just 100 days before anything went through at all. I should think that point is worth remembering in trying to estimate what we have to promise in the way of time for recovery.

DR. E. F. ROBINSON, Kansas City: Two points I want to emphasize. One is that a case of suspected nerve injury should at once have a careful dissection by a competent surgeon, and it should be done very early. Even though the surgeon may not discover any great inflammation or scar tissue, it will result in benefit to the patient afterwards. As an example, I have recently seen a child whose shoulder was broken at birth. A month afterwards a surgeon in Oklahoma fastened the bones together. Four months afterwards I saw the child with a claw-like hand and paralysis and rigidity due to nerve injury. I could promise but little; in fact, I could promise nothing, but I felt it was the part of common sense to make an effort to dissect the nerves of the brachial plexus. This was done and greatly to my surprise within about four weeks the child commenced to bend the elbow. A little motion is even now shown. I do not believe we should promise anything under one and a half to two years. Years ago I can recall a gunshot wound where I resected a neuroma. I saw that man two and a half years afterwards. The nerve had been absolutely severed and resutured, but greatly to my surprise the man had gained a very considerable degree of benefit and he told me it was more than a year before he noticed any change. I think we should always state to our patients that they must not expect any very great change under a great number of months, and I should say it would be a year or more in almost every case. But we should give any nerve injury early dissection because I confidently believe, as do all who have thought on the subject, that if you wait very long there is not much use of doing anything.

DR. THOMAS G. ORR, Kansas City: There is no doubt but that there has been a great advance in this branch of war surgery. The final results, however, we shall see when this army commission reports on the various nerve injuries.

There is an interesting condition which has been mentioned by Dr. Robinson, in connection with nerve surgery, that was observed by Weir Mitchell in the Civil War called *causalgia*. It is a terrible condition from the standpoint of the patient. It is characterized by a persistent, throbbing pain which sometimes drives the patient almost to suicide and will drive him to invalidism. Fortunately, only a small percentage of peripheral nerve injuries have this complication. These *causalgias* are operated by Dean Lewis by injecting 60 per cent. alcohol directly into the nerve after performing a *neurolysis*. I was especially interested in this because of its connection with the painful amputation stumps mentioned by Dr. McFadden. Some of these painful nerves resemble very much this *causalgia*. The pain will be persistent night and day, regardless of whether they wear an artificial limb or whether there is an external irritation. I feel that in doing amputations in general every nerve should be cut high and injected above the division with alcohol to prevent the formation of neuroma. However, the presence of a neuroma does not necessarily mean a tender stump. It depends on two factors, whether it is involved in the scar or whether there is some inflammation. I have removed four of these tender neuromas which have been examined by a pathologist. Three showed definite round cell infiltration. All were involved in scar tissue.

DR. W. T. COUGHLIN, St. Louis: The benefits to be derived from interference in the condition due to paralysis of the hypoglossal nerve are not commensurate with the risks undertaken. I have on three occasions resected the hypoglossal nerve, and the interference that occurs to speech after some months is really a very trifling sort of thing. Possibly there are nervous patients that exaggerate and make it worse.

The question of splints I think is important to keep the parts in position so that when function is restored in the nerve it will be restorable in the muscle. If the muscles are allowed to contract or overstretch the restoration of the nerve is not likely to be followed by restoration of the muscle function.

One of the essayists spoke of the use of a dry field. Did he mean merely to secure hemostasis, or did he mean that while operating the field must be kept dry? Certain neural surgeons insist on working under a saline stream.

As to the use of the flap, it is going to be pretty hard to convince people that flaps are not of much use. Recently we had a surgeon publish the fact that he had overcome 10 inches of the sciatic nerve, by bringing down a flap, with good success. I would have to see the patient and examine him myself "before" and "after" in order to know. Sometimes one can shorten the humerus and overcome a defect of the musculospiral; one can shorten it 1.5 or 2 inches without any inconvenience to the patient whatever. I have one patient who was sutured and the defect was something like 5 cm. The suture was not followed with success and on dissecting it I found a gap of at least 5 cm. still separating the ends. I did not do the first operation. I could not get them together with any hope of success, so I excised a portion of the humerus and he has a very good and useful hand.

DR. G. WILSE ROBINSON, Kansas City, closing: One thing that impressed me relative to nerve injury was this fact that with the most extreme physiologic interruption there occurred very frequently rapid spontaneous recovery. I recall one case of injury to the sciatic in which the man came in with complete loss of function and apparently anatomic interruption. Within a few weeks that man returned to duty with complete restoration of function.

Dr. Reder mentioned Tinel's sign of regeneration. Within the past two weeks I have had occasion to see two cases of musculospiral suture done by Dr. Teachenor of Kansas City, at Fort Dodge, and in one case that sign was positive below the scar. In one of these cases there was extensive scar tissue and Dr. Orr of Kansas City did some work on him later. In this case there was about 3 inches of nerve transplantation. The sign of formication was not obtained below the scar, showing there was a block of the regenerating fibers.

In the other case I saw the suture was done above the middle of the humerus and he had the sign of formication at the middle of the forearm. He was also able to extend the wrist slightly.

Dr. Bliss mentioned Dr. Head's experiment on himself in which he had the radial nerve cut, which is purely sensory. Dr. Head stated that it was almost seven years before there was complete restoration of function.

DR. R. D. IRLAND, Kansas City: On account of the time limit I was unable to say anything about the postoperative treatment in these cases. I would like to say that at our hospital we considered the postoperative care as being very valuable. We felt that it is not only a good thing but a necessary thing to give these patients the advantage of massage and various treatments of physical therapy for the purpose of preventing fibrosis of the muscles, for if there is complete fibrosis of the muscles it does not make



any difference so far as restored function is concerned whether there is nerve regeneration or not.

As for splints, it is a common practice to put these cases in rigid splints, and in the treatment of cut ends of nerves a rigid splint is necessary for possibly three or four weeks, at which time you can begin to straighten out the limb. This is done gradually, and during the course of straightening out the limb we will have to apply fairly rigid splints for three or four weeks at gradually increasing angles. But after this period, while we are waiting for regeneration to appear, the use of the rigid splint was condemned by our staff at Fort Sheridan. Take for instance a case of radial paralysis; these cases are commonly put in a rigid cocked-up splint which puts the flexor muscles on a stretch, and if that is continued for a long time all the flexor muscles lose considerable function. So up there we adopted a flexible splint arranged with springs which kept the hand, wrist and fingers from assuming constantly flexed positions and which gave the extensor muscles ample play. A distinct advantage in this is that it affords a chance immediately to note the slightest return of function.

#### SYMPTOMATOLOGY AND DIAGNOSIS OF NERVE LESIONS\*

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In considering any lesion of the central or peripheral nervous system we must first attempt a decision on the following points: 1. Is there a lesion? 2. Where, or at what level of the nervous system is it located? 3. What sort of lesion is it?

In many instances, especially if the lesion be located within the central nervous system, we can but surmise as to its nature and level by the outward symptoms of dysfunction and afunction, manner of onset, associated symptoms and complications. In lesion of peripheral nerves, if these questions be shrouded with much doubt, we can resort to surgery for the purpose of determining the nature and extent of the lesion. If it is decided that a surgical investigation is advisable, in order that effort be not wasted and tissues be not unnecessarily mutilated, the surgeon must know of his own knowledge, or be told by some one who does know, what nerve or nerves have been injured and at what level. This knowledge can be acquired in but one manner, namely, a previous knowledge of the motor and sensory disturbances resulting from injury to individual nerves at certain levels; and it is also very essential that we be able to determine as to whether the lesion is complete or incomplete, whether there is entire or partial anatomic and physiologic interruption.

There is usually nothing in the general symptomatology of nerve lesions indicating the nature of the lesion or the character of violence caus-

ing the injury. The general symptoms do not tell us whether the injury has been caused by a gunshot wound, a puncture of the nerve, an incision or contusion; and, too, the symptoms of nerve wounds are of such general similarity in all parts of the body that they can be treated in a most general manner.

The immediate symptoms of nerve injury are local and general. There is considerable diversity in the first sensations following nerve injury. In some the sensation is similar to that experienced by being struck by a stick or stone. In other cases there is intense pain felt at site of wound and down the nerve trunk. The interest of the profession has recently been chiefly directed to those nerve lesions resulting from gunshot wounds.

This paper is largely based on an observation of several hundred such lesions seen while serving with Base Hospital No. 28 at Limoges, France, and an additional considerable number seen more recently as an examiner of war risk cases. In but a very small percentage of these lesions was there complete anatomic or physiologic interruption and in but few was nerve surgery indicated, as spontaneous recovery is the general rule.

The relative frequency in which the various nerves suffered lesion is of some interest. In one list of 1,204 wounded soldiers examined of 204 showing symptoms of nerve injury these injuries were divided as follows: Facial nerves, 8; trigeminal nerves, 18; brachial plexus, 9; musculospiral nerves, 24; ulnar nerves, 40; median nerves, 26; circumflex nerves, 4; sciatic nerves, 19; anterior crural nerves, 3; external popliteal nerves, 28; internal popliteal nerves, 20; internal cutaneous of arm, 5; external cutaneous of thigh, 4; internal cutaneous of thigh, 1.

It was my observation that approximately 7 per cent. of all wounded soldiers had definite nerve lesions. The aggregate number was large and there is considerable "hang over" disability resulting therefrom.

The types of nerve lesion, as described by Pierre Marie and Foix, are three main types, namely, (1) complete section; (2) pseudoneuroma of attrition; (3) lateral notch; and four types of accessory lesions, viz., (4) complete section with pseudocontinuity; (5) lateral pseudoneuroma with or without lateral notch; (6) partial neuroma (intra or juxta nervos); (7) simple nerve induration.

The symptoms of complete section would obviously be those of complete anatomic and physiologic interruption at level of lesion.

The pseudoneuroma of attrition gives general symptoms of partial interruption in the majority of cases.

The symptoms of the lateral notch are of complete interruption of a part of the nerve

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trunk, the remainder being not disturbed in function.

Pseudocontinuity occurs when there is complete section and the nerve is held together by a fibrous band with slight retention of function.

In the case of the lateral pseudoneuroma lesion there is but partial interruption with varying degrees of disability.

The partial or enucleable neuroma, too, gives symptoms of but partial interruption.

Simple induration of nerves have usually, as one of the most outstanding symptoms, intense and most persistent pain, known and described by Wier Mitchell as *causalgia*, and chiefly found in the median and sciatic nerves.

Alterations in the color and appearance of the skin as a whole or within the area of distribution of the supposed injured nerve should be noted. The temperature of the injured and sound area should be tested. The afuction or hyperfunction of sweat glands should be investigated, eruptions, ulcers, deformities of the nails, alterations in the growth of the hair and nails, atrophy and thickening of the skin may be present, and a glossy appearance of the skin, as described by Wier Mitchell, may occur in incomplete nerve lesions.

Severe vasomotor, trophic and caloric disorders indicate a vascular lesion associated with the nerve injury.

We divide the peripheral nerve fibers into afferent and efferent, the afferent carrying impulses of sensory character to the center and the efferent carrying impulses from the center to the peripheral tissues. It is usually necessary to make a sensory investigation within the domain supplied by the nerve under suspicion of injury.

The peripheral afferent nerves are divided into superficial and deep. The superficial are those with end organs within the skin; the deep have their end organs within muscles, tendons, joints, and bones. Head has divided the superficial system into two subsystems, the *epicritic* and the *protopathic*.

These three systems, the *epicritic*, *protopathic* and deep, constitute the anatomy of the peripheral mechanism of sensation; and they may regenerate and vary in extent independently of one another. Through the activity of the *epicritic* system we appreciate light touches, such as those of cotton-wool over hairless parts, intermediate degrees of warmth, the size, shape or pointed nature of the stimulating object. The activity of the *epicritic* system controls and checks the excessive and widespread sensations which appear whenever the *protopathic* mechanism alone is responsible for the appreciation of the stimulus.

The sensory mechanism of the skin, which is the oldest biologically, has been called *protopathic* because its chief function is to warn the

organism that noxious influences are acting on its surface. By its activity it reveals to us not so much the quality of the stimulus but its effect. It reacts to painful stimuli and to the more extreme degrees of heat and cold.

In the regeneration of the superficial nerves after division, the *protopathic* system becomes active, much in advance of the *epicritic* or discriminating system. A pinprick on the surface in this condition is less plain but more painful, and the affected area shows the excessive reaction, the widely radiating sensations, and other phenomena characteristic of the activity of this mechanism when uncontrolled by the higher discriminative forms of cutaneous sensation. It is the opinion of Head that this is biologically the oldest mechanism now active in our bodies, and its functions are restored more quickly than those of any other sensory mechanism. Another interesting feature about cutaneous sensibility which is of much clinical importance is the fact that the loss of sensibility to prick and to cotton-wool varies independently of one or the other during regeneration. The relative extent of the two forms of sensory loss depends on the situation of the lesion in the course of the nerves. The nearer the lesion lies to the periphery the more will the loss of sensation to cotton-wool exceed that of the analgesia to prick. Conversely, the nearer the lesion lies to the spinal cord the greater will be the relative loss of sensation to prick, and in lesions of nerve roots it may exceed considerably the extent of the anesthesia to cotton-wool. It is also important to know that when nerves are but functionally disturbed the sensations to cotton-wool and prick stimulation return together, whereas, if the nerves be divided, sensation to prick returns many months before the sensation to cotton-wool.

The functions of the deep sensory system rest on the integrity of the fibers from the joints, tendons and muscles. All the nerves to the superficial structures may be divided without impairing in any way the function of this system. It is through this system we appreciate sensations of pressure touch, pressure pain, the vibrations of a tuning-fork and the posture of our limbs. If the examiner uses pressure in his examination, his pressure evokes both a tactile and painful response, and he may overlook the fact that the skin is insensitive to light touch and prick.

I shall next consider the methods for examining sensation. These methods are based on the following schedule as outlined by Head:

(A) Spontaneous sensations: Pain, numbness, tingling, position of the limb, idea of the limb.

(B) Loss of sensation:

1. Touch: (a) Light touch: cotton-wool on hairless and hair-clad parts, threshold with von



Frey's hairs. (b) Pressure touch: threshold with pressure esthesiometer.

2. Localization: naming the part touched; Henri's method as modified by Head and Holmes.

3. Roughness: threshold with Graham-Brown's esthesiometer. Sandpaper tests: discrimination of relative roughness.

4. Tickling and scraping: tickling on soles and palms. Cotton-wool rubbed over hair-clad parts. Light scraping with the finger nails.

5. Vibration: loss or diminution of sensibility: alteration in the character of the sensation evoked.

6. Compasses: points simultaneously applied; points successively applied.

7. Pain: (a) Superficial pain, pinprick threshold with the algometer, reaction to measured painful stimuli. (b) Pressure pain: threshold with the algometer, reaction to painful pressure.

8. Temperature: threshold for heat and cold, effect on adaption to threshold, discrimination of different degrees of heat and cold, effective reactions: (a) to extreme degrees; (b) to warmth.

9. Position: by imitating with the sound limb the position of the affected limb, by pointing with the sound limb, measurement of the defect by Horsley's method.

10. Passive movement: appreciation of movement, recognition of the direction of movement, measurement of the angle of the smallest movement which can be appreciated, falling away of the unsupported limb when the eyes are closed.

11. Active movement: imitation of movement by the sound limb, ability to touch a known spot, measurement of the defect by Horsley's method.

12. Weight: (a) With hand supported: recognition of differences in weight applied successively to one hand, appreciation of increase or decrease of weight, comparison of two weights placed one in each hand. (b) With hand unsupported: comparison of two weights placed one in each hand, recognition of differences in weights applied successively to one hand.

13. Size: difference threshold, distinction of the head from the point of a pin.

14. Shape: (Two dimensions.) Test with disks of leather.

15. Form: (Three dimensions.) Recognition of common objects by their form.

16. Texture: Ability to recognize by sense of touch different fabrics.

The degree of sensory change is not the same over all of the cutaneous area supplied by the affected nerve. If physiologic interruption of a mixed nerve be complete there is an area of

anesthesia surrounded by an area of hypesthesia due to an overlapping of other nerves which invade the hypesthetic area.

The general motor symptoms of nerve lesions are alterations of the electric reaction. The nerves and muscles of the injured and sound side should be tested. On the injured side there may be partial or complete reaction of degeneration. Reaction of degeneration is indicated in the nerve by faradic and galvanic irritability being abolished; in the muscles by faradic irritability being abolished, galvanic irritability being increased or decreased. Partial reaction of degeneration is characterized by a faradic and galvanic decreased irritability in the nerve, decreased faradic irritability in the muscles and a decrease or increase of galvanic irritability.

Little attention is now paid to the inverted formula. There is decrease in the range and power of muscle contraction. This varies according to the degree of physiologic interruption. The ability of the patient to move the segments of the injured extremity in all normal directions should be tested. These movements should be made without interference on the part of the examiner and against resistance, and comparison made with the sound extremity. The alteration in power may be tested by the aid of a small hand scale, or the grip may be measured by the hand dynamometer. The muscle tone is decreased. There may be fibrillary twitching of the affected muscles, and the tendon reflexes are decreased or abolished. If there is complete anatomic interruption of the nerve there is a flaccid paralysis of the muscles deriving their entire nerve supply from the injured nerve. Atrophy of the muscles results. A very simple method of testing the amount of wasting in the affected extremity is by comparing the amount of water displaced by the affected and sound extremity. Time will not admit of a detailed description of all symptoms resulting from lesion of the various peripheral nerves.

The facial nerve is largely motor in function and a complete lesion results in the well known Bell's palsy. There are some minor differences in the symptomatology varying with the level of the lesion, but a unilateral paralysis of the facial muscles both upper and lower if the lesion involves the main trunk of the nerve.

The trigeminal is divided into three main branches peripheral to the gasserian ganglion. The inferior branch is a mixed nerve innervating the muscles of mastication. Lesion of this branch gives paralysis of these muscles as well as sensory loss over its area of distribution. The superior and middle branches are purely sensory and lesion results only in sensory disturbances.

The muscles supplied by the musculospiral are extensor and supinator in function and with

a high lesion the function of extension of forearm on arm is abolished due to paralysis of triceps and anconeus, ability to supinate the hand is lost and there is wrist drop, the hand assuming a position of flexion on arm and pronation. The sensory changes are of minor importance involving the back of thumb and back of hand over radial side.

The median nerve is a mixed nerve. Its motor functions are pronator and flexor and abductor of thumb.

It is in median nerve lesions we get the ape-like appearance of the hand. The abductor pollicis supplied by the ulnar nerve draws thumb on level with other fingers and the hand appears larger than the sound hand. It is drawn slightly toward the ulnar side. There is paralysis of the flexor sublimis and outer segments of the flexor profundus digitorum.

The sensory changes are not constant but usually complete anesthesia over two distal phalanges of index and middle fingers.

Partial lesions of median give a severe and most distressing form of spasmodic neuralgia known and described by Wier Mitchel as causalgia.

The appearance of the hand is important in ulnar nerve lesions, as the major portion of the muscles of the hand are supplied by the ulnar. There is much atrophy of these muscles and of the hypothenar eminence. There is paralysis of the flexor carpi ulnaris and of the ulnar division of the flexor profundus digitorum.

The interossei are paralyzed and as their function is flexor to the first phalanges and extensor to the second and third there is clawing of the fingers in ulnar lesions. The sensory loss in ulnar lesions is chiefly of the ulnar side of hand and little and ring fingers.

Associated lesions of the median and ulnar nerves may be partial or complete and often there are vascular lesions complicating the nerve lesion and giving symptoms of vasomotor, trophic or secretory changes.

The symptoms vary in accordance as to which nerve is more severely injured, and also as to the level of the lesion.

The ape-like hand of purely median lesions and the characteristic clawing of purely ulnar lesions are neither so well marked.

As vasomotor, secretory or caloric changes are usually present, the fingers are edematous, glossy, cyanosed or purplish, and ulceration and deformities of the nails are commonly seen.

Lesions of the brachial plexus may be of several varieties.

Lesions of the upper plexus give symptoms of paralysis of muscles of shoulder girdle and flexors of forearm or arm.

Lesions of the middle plexus show symptoms of musculospiral and circumflex paralysis.

Lesions of lower plexus give symptoms of

combined lesions of the median and ulnar nerves.

Lesions may involve all the cords of the brachial plexus. In such case the symptoms are combined paralysis of the muscles of shoulder girdle, arm, forearm and hand with extensive sensory changes.

Lesions of the anterior crural nerve are rare. I saw five cases. All of the right anterior crural and all due to machine gun bullets passing laterally through the pelvis, unaccompanied by complications.

The motor symptoms were paralysis of the sartorius, quadriceps femoris, abductor longus and pectineus. The lesion involving the trunk in the pelvic, all terminal branches were affected. The sensory changes were anesthetic over the antero-internal aspect of the thigh and hypesthesia over the internal surface of shin and foot. In all cases there was spontaneous recovery.

Lesions of the great sciatic and its terminal branches were of frequent occurrence. Those involving the trunk of the nerve in the thigh resulted in a flaccid paralysis of all the muscles of the calf and foot with foot drop and anesthesia over all of the skin area of the calf and foot excepting a small portion of the superior posterior surface which is supplied by the small sciatic and the internal area of the shin and foot supplied by the internal saphenous, which is a cutaneous terminal branch of the anterior crural; also loss of power of flexing the leg on the thigh.

The usual symptoms of lesion of the external popliteal nerve are foot drop, an inability to flex foot on leg, and an inability to extend the toes on the foot, also loss of power of foot abduction, and an anesthetic area along outer aspect of calf and along dorsum of foot.

The symptoms of lesion of the internal popliteal are an inability to extend the foot on leg or flex toes on foot, anesthesia of heel, sole and inner and outer border of foot.

It is observed that the vasomotor, trophic and secretory changes occur only in those cases in which there is an arterial lesion associated with the nerve lesion.

The vasomotor disturbances usually seen are a reddish purple or blue black color of the skin of hand or foot, or a glossy tense condition of the skin, or a succulent and infiltrated appearance, or with considerable trophic disturbance in the nails, fingers and toes ending in loss of substance.

In all such cases a careful examination should be made not only of the nerve supplying the parts affected but also of the arteries as well. There is usually a history of considerable hemorrhage as one of the immediate results of the wound.

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**SOME CLINICAL OBSERVATIONS ON THE  
SUMMER DIARRHEA OF INFANTS\***

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Three years ago I began the systematic study of the stools found in cases of summer diarrhea for the purpose of determining the cell content. The method of examination has been described in another place.<sup>1</sup>

We have made over 1,000 such examinations; the stools were taken from more than 300 infants suffering from diarrheal diseases. We have found this simple method of examination a valuable aid in differentiating the functional from the inflammatory varieties of diarrhea. It has become a routine practice to examine all stools in regard to their cell content. I wish to urge that this test become a part of the physician's examination of the stools, for it is the easiest way to differentiate an indigestion from an enteritis. We have divided the summer diarrhea into three groups:

1. *Fermental diarrhea*.—This is a functional derangement and the stool shows very few leukocytes. There may be an abundance of mucus, however. The disease is due to the excessive fermentation of carbohydrates in the presence of unabsorbed protein, and may occur at any time during the year. It occurs especially among infants who are overfed on the more easily fermentable sugars, such as the stronger malt preparations. It is prone to occur in infants fed on cows' milk mixtures containing a high percentage of sugar, such as condensed milk. In these cases the stools are very acid and irritating to the buttocks. Fever does not occur and most cases are promptly relieved by excluding the fermentable carbohydrates from the diet. Only in a small number of cases in which a severe irritation of the intestinal mucosa has been produced is it necessary to resort to buttermilk preparations. It is probable that the hot weather reduces the tolerance of the infant for food and there are more cases of this disorder in the summer than in the winter. About one-fourth of my series were placed in this category.

2. *The dysentery group*.—These cases are easily recognized by the severe symptoms of fever and prostration, by the local symptoms of pain and tenesmus, and by the characteristic bloody, mucopurulent passages. About 10 per cent. of all clinical cases in this series showed the character of a dysentery.

3. *Summer diarrhea proper*.—This is the most common form of summer diarrheal disease. The onset is sudden, generally attended

by fever, sometimes convulsions. The diarrhea may begin at once or not for one or two days. The stools may be green, yellow, or brown, and on the first day are often very acid. The distinctive character of the stools is that they are watery. The baby has from five to thirty of these watery stools daily. The fluid nature of the evacuations is best shown when it is drawn from the rectum by means of a tube.

In distinction from fermental diarrhea the disease is protracted. It does not yield readily to a change of diet or medication. The diarrhea persists for several days, sometimes for several weeks. Gradually the stools show more consistency and often mucus and occasionally macroscopic mucopus. Blood is rarely observed.

The fever may last for one or two days only. Severe symptoms of intoxication, at the onset indistinguishable from the so-called alimentary intoxication, are very common. The typical syndrome of acidosis may occur at any time. Symptoms of exsiccation of the tissues, as shown by the dry, inelastic skin, will sooner or later make their appearance in severe cases.

We have found that the stools of dysentery and summer diarrhea proper contain an enormous number of pus cells. These pus corpuscles are composed principally of leukocytes and lymphoid cells, especially the large germinal cell, which is found in the solitary follicles of the intestine.

Summer diarrhea is a follicular disease and since we are not familiar with any poison except bacteria which will produce clinically a discharge of pus cells, we must regard the disease as an infectious process.

A reasonable explanation of the process may be offered. The pathogenic bacteria gaining admission into the epithelial lining are carried to the nearest lymphoid follicle. Here they cause an inflammation and the defensive forces finally extrude the offending bacteria together with leukocytes and lymphoid cells. As soon as this is accomplished, the lymph follicle heals, the columnar epithelium covering it is regenerated, and no vestige of the disease remains.

The severity of the disease depends primarily on the number of follicles infected and this again on the dose of the original virus. It is probable, too, that the infection may extend from one follicle to the other and in this way cause an augmentation in the severity or duration of the disease.

The cure depends almost entirely on the defensive powers of the body. It is futile to attempt to destroy these germs, which have invaded the mucous membrane, with intestinal antiseptics. The majority of cases get well in a few days whether one drug or another is prescribed. If the previous condition of the baby is good and if the dose of the germs is not too large, the baby will get well if it is properly fed and nursed.

\* Read before the Sixty-Third Annual Meeting of the Missouri State Medical Association, Jefferson City, April 6-8, 1920.

1. Am. J. Dis. Child., 15: 413.

If, then, we regard the principal forms of summer diarrhea as an infection of the mucosa and solitary follicles, what part does heat play in the causation of the disease?

The theory that heat is the direct cause of summer diarrhea springs up perennially, but in the language of Cooke, "Something more than heat is necessary to produce the disease." It is inconceivable how heat alone can produce an inflammatory condition of the intestine with a discharge of pus cells. And yet heat is a powerful factor in the morbidity and mortality of summer diarrhea.

As regards the morbidity, reference need be made only to the fact that hot weather favors the development of bacteria in all vegetable matter, in manure, and in milk and cream. Again, hot weather brings out certain germ carriers—flies and insects. Dysentery is well known to occur mostly in the summer months.

The direct effect of heat on the infantile organism must not be underestimated. The death rate of diarrhea is about three times as high in hot weather as in cool weather. A follicular enteritis in March is much less dangerous than the same disease in July. Heat acts deleteriously in many ways, but the abstraction of water from the tissues is most obvious. This rapid dehydration of the body is a most serious complication and needs our utmost efforts in prevention. The danger in an enteritis is not only the toxin produced by the dysentery bacillus, but also the nutritional disorder which accompanies or follows the infection. In fact, it is the nutritional disorder which carries off more infants than the toxin of the infecting micro-organism.

Our studies indicate that the principal agency in conveying the infection is raw milk. A serious problem is ice cream, which seemed to be the carrier in fully one-fourth of our cases. It is a most difficult task to teach the laity that commercial cream is a dirty food and often contains virulent germs. Mothers will nurse their babies and carefully feed their young children, but will give them a taste of ice cream at the start. The direct transfer of the poison from the adult to the baby is very common. The infected fingers of a member of the household are responsible for many cases of enteritis in infants. A diarrhea in an older child or adult is dangerous to the baby.

The prevention of summer diarrhea rests in the recognition of the source and mode of conveyance of the germs. Boil the milk and cream, give no ice cream unless the cream has been previously boiled. Keep flies and insects away from the baby, and regard every acute attack of indigestion in the adult as a possible source of danger to the baby.

Since summer diarrhea, excluding the cases of fermental diarrhea, is an infectious process, it should receive the same attention as an in-

fectious process elsewhere; that is, due attention should be given to the healing power of the infant. It is a mistake to give these infants a preliminary purge without taking into consideration whether it is necessary. Calomel, in my estimation, predisposes to acidosis and I have ceased giving it. Castor oil often upsets the stomach and ricoleic acid is often very irritating to the intestine. My favorite laxative is a mixture of milk of magnesia and aromatic syrup of rhubarb. It should be remembered that the purpose of the purgative is not to remove the infection from the solitary follicles, but to remove fermented and putrefactive material from the alimentary canal. This may often be best accomplished by an enterocolysis.

The period of starvation should not be long, twenty-four hours is long enough. Meanwhile, water and alkalies must be liberally supplied to the body. For there is one fact which metabolic studies have established; namely, that diarrhea robs the body of alkalies and this predisposes to acidosis. The administration of bicarbonate of soda or the citrates of soda and potassium has become routine preventive measures in diarrheal diseases.

The symptoms of intoxication rapidly disappear when the pus is discharged, and it is still questionable whether any of our therapeutic means hasten this process. In most cases the toxic symptoms disappear in twenty-four to forty-eight hours even when the patient is not starved. Starvation for a short time gives rest to the bowel and probably diminishes the septic absorption from the follicles. After this rest the principal object in treatment is the feeding of the baby whose intestine is injured. Any excess of food is hurried through the intestine and goes more to feed the saprophytic bacteria in the lower bowel than the patient. The putrefactive and fermentative products irritate the bowel and increase the diarrhea.

Of all the food elements the carbohydrates are most essential. If Schloss is right, that an impaired renal function is present in intoxication, the administration of protein substances are contraindicated. Do not, therefore, give milk, beef peptones, egg nor whey in summer diarrhea. Give carbohydrates. These, in children over 7 months of age, are best administered in the form of gruels. Barley gruel, rice gruel, wheat flour paps, corn meal mush; these are the substances which are safest in summer diarrhea. The babies can live on these for many days or even weeks, especially if a little casein, or dry milk, is gradually added. These cereals are especially valuable since they do not ferment readily. Cane sugar or milk sugar may be safely added. If putrefaction with weakly acid or alkaline stools is marked, an easily fermentable malt preparation may be added cautiously.

Carbohydrates are known to favor the hydra-



tion of the tissues and it is doubtful that exsiccation of the tissues will occur as long as carbohydrates and water can be administered. Buttermilk preparations should be reserved for convalescence and for young infants who have a very feeble power to digest starches. Occasionally even an older infant does not absorb cereals and these may undergo a strong fermentation with acid irritating stools; then buttermilk, or casein buttermilk, must be used. Also in infants who have suffered for a prolonged period from protein starvation, e. g., infants fed on condensed milk or malted milk, or very weak cows' milk mixtures, should be placed early on buttermilk preparations.

It is well to restrain excessive peristalsis with opium and belladonna. Bismuth has little effect except to diminish intestinal fermentation which is best controlled by diet. Tannin preparations are most serviceable in protracted cases when the irritability of the intestine persists.

In our study of these cases we have found that relapses are very common. These are not always due to an error in diet as is often assumed, but to a reinfection of some other part of the intestine. In several cases, after the infant seemed nearly well and the pus cells had disappeared from the stools, a recurrence of the diarrhea was coincident with another discharge of pus cells. There is no way to prevent these relapses.

A serious complication is the development of acidosis. The symptoms are stupor or drowsiness, sometimes convulsions, and the characteristic deep breathing, hyperpnea. We have not had a single case in about eighty cases of diarrhea last summer. Three cases were seen in consultation. One was a typical dysentery in a boy 5 years of age; another was gastroenteritis in a girl 2 years of age; the third was in a child about 18 months of age. All recovered when sodium bicarbonate was given in large doses with a carbohydrate food.

The exsiccation of the tissues is exceedingly difficult to treat. The hypodermatic, intravenous, or, as it has been recently recommended, the intraperitoneal administration of salt solution has only a fleeting stimulating effect. The hydration of the tissues takes time and must depend on a much more elaborate process than the flooding of the blood with water. There is something wrong with the tissues, they do not imbibe water until the infectious process is better and some mixed food has been absorbed. I have been impressed with the clinical value of fruit juices with the water in these cases—orange juice, grape juice, apple juice and peach juice have been used. In several cases of dehydration, I always give a little acid fruit in the water sweetened. Several severe cases might be reported that were favorably affected.

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## FEEDING OF ATHREPTIC INFANTS\*

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*Definition.*—There are many grades of malnutrition in infants; the most marked is called athrepsia, which is known by various names, e. g., infantile atrophy, marasmus, decomposition, simple wasting; none of which are descriptive of the condition. The term athrepsia, from *a*, privative, and *threpsis*, nourishment, introduced by Parrot, 1874, has the advantage of being descriptive of this severe malnutrition. Athrepsia is not a primary disease, but like icterus is a symptom rather than a disease.

*Etiology.*—Infants of all ages can have athrepsia or marasmus though it is most common between the fourth and eighth month. It is a condition of starvation in which less food is absorbed than is sufficient to care for the demands of the body for growth and fuel. There are many causes of malnutrition in infants, the chief one being neglected and prolonged diarrhea. Underfeeding for a long time in either breast or artificially fed babies will end in the same result. Babies may be fed on cereal water, a too diluted milk and other weak foods, and develop extreme malnutrition or athrepsia. In diarrhea less food is absorbed than is needed and if proper treatment is not instituted the body will first use the glycogen and fat, then the body protein is consumed, and unless this condition is relieved it soon becomes incompatible with life. Other causes of athrepsia are subacute or chronic diseases—tuberculosis, hereditary syphilis, bronchopneumonia, otitis media, pyelitis, and a few others. Congenital malformation of the heart, atelectasis and sometimes prematurity also have the same result. Here the body receives enough food but is unable to utilize it. The symptoms of athrepsia seem to be due directly to a diminished blood protein content, which in turn does not allow the blood to maintain its water content and results in a lessened volume flow of the blood. This, in connection with the weakened condition of the heart muscle, due no doubt to the poor circulation through the coronary arteries, causes a decreased absorption of food from the gastro-intestinal tract, or, in other words, the condition started by prolonged starvation, either due to a diarrhea or insufficient amount of food, is kept up by the dehydrated condition of the body and as there is a lowered tolerance for food a vicious circle is formed which can only be overcome by careful treatment. The appearance of infants with athrepsia or marasmus is characteristic and all who treat infants are familiar with it. They are bright and expectant, very seldom at rest,

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either have their fists in their mouths or tearing their lips with their finger nails. They are emaciated and look like little old men. The eyes are bright but are sunken, due to loss of postorbital fat. The skin is pale and transparent, has lost its tone and hangs in folds over the body. In severe cases and during collapse there is cyanosis giving a grayish hue to the skin. This cyanosis is noticed first about the mouth. Bones of the face are prominent and the hands look like bird claws. The ribs and sometimes the outline of coils of intestine can be plainly seen. The cry is weak and sometimes there is a functional murmur heard over the precordial region. The temperature averages subnormal and it may not be above 97 F. for weeks. During collapse it may go down to 95 F. or lower. The stools may be normal or even constipated but at the least error of diet there is a diarrhea. Vomiting is readily excited; the babies are always hungry and take the bottle with eagerness but may vomit part or all of it immediately. The weight of athreptic babies is characteristic. It remains stationary or goes steadily downward. It is much below that of a normal infant of the same age. In milder cases the weight remains at the same level with perhaps a weekly variation of 1 or 2 ounces. In severe cases there is a steady loss of weight. On account of the greatly lowered resistance, complications are frequent, especially of the respiratory tract. The most common ones are bronchitis, bronchopneumonia, thrush, otitis media and pyelitis. Bed sores and furunculosis are common. Sometimes there develops general edema which causes the infant to have an unexpected gain in weight which may amount to several ounces a day. The edema may increase until there is a water logging of all the cellular tissues and the babies may lose this weight as rapidly as it was gained. On account of poor circulation of these infants collapses occur frequently. During collapse the skin becomes cold and cyanotic, the temperature falls sometimes as low as 94 or 95 F. and convulsions and even death may occur. Sometimes there is a mild degree of acidosis present due to the failure of the kidneys to excrete the acid phosphate and to the production of acids in the tissues due to incomplete oxidation on account of decreased circulation of the blood.

*Prognosis.*—The older the child the better the prognosis. Unless proper feeding is instituted early for marasmic infants under three months the outlook is bad. These infants do better when taken care of in the home than they do in institutions, partly due to the individual care given them and to the less frequent exposure to infections, to which they have little resistance. It may take months of the most careful treatment before these babies can be cared for as normal infants. However, after

recovery does take place there are no noticeable bad after effects.

*Treatment.*—Prevention is of first importance. All babies should be watched carefully, especially those fed artificially, and if they are not gaining properly the cause should be sought and remedied if possible. Maternal nursing should be encouraged but if it is not possible a properly modified cow's milk feeding should be ordered. There are some few infants that become athreptic even when given the best care, especially the premature infants and some with congenital heart disease. All infants with diarrhea should be treated intelligently, usually with a twenty-four hours or shorter period of starvation, and then gradual increase of suitable food. Bad feeding almost invariably will lead to some intestinal disturbance. The food of babies, particularly during the first two years, should be carefully supervised at all times. When the infant has athrepsia or marasmus it is necessary and important to give the greatest attention to details. Every factor of the child's daily existence should be gone into thoroughly. The diet of course is most important. An error of judgment or a relaxation of vigilance may put the patient back weeks. It is necessary to have the full confidence and cooperation of the mother or caretaker of the child. Much patience is required both of the physician and mother as it is sometimes weeks even under the most favorable circumstances, before these patients begin gaining. Breast milk for these athreptic babies is the best food but in the majority of cases this is unobtainable. If it can be gotten it should be given in small amounts at first and increased as rapidly as the tolerance for it is increased. Breast milk, where the amount is small, can be advantageously supplemented with whole lactic acid milk. Where the baby vomits the sweet breast milk it usually is retained when it is soured with the lactic acid organism. These babies before they begin to gain require practically the same amount of food as they would if they were normal weight. Their tolerance for food is low due to the atrophy of the blood and consequently poor circulation through the wall of the intestinal tract and the digestive glands. These infants readily develop diarrhea or vomiting with overfeeding. As the tolerance for different foods varies, one should be selected that can be given in the largest amounts without causing a gastro-intestinal upset. These infants require usually above 150 and often 200 or more calories per kilo, or in other words, one and one-half times, and sometimes twice, the amount of food than would normal infants of the same weight before they began to gain.

The food that I have been using during the past year for these athreptic babies in private and clinic practice is one advocated by Dr. Marriott of the St. Louis Children's Hospital.



It consists of whole lactic acid milk with the addition of carbohydrate in the form of corn syrup. I have used this feeding in twenty-five cases of babies in different stages of athrepsia or marasmus with uniformly good results. The whole lactic acid milk used in most of the cases was from the Walker Gordon Laboratory but when this was not obtainable the milk was prepared with very little trouble and good success in the home with cultures of the Bulgarian bacillus. The corn syrup used was one of the widely advertised commercial brands of ordinary table syrup. As it is difficult to mix the thick corn syrup with the whole lactic acid milk, the syrup is used by diluting it with an equal volume of water. The advantage of corn syrup as the additional carbohydrate lies in the composition of the syrup. It can be given in large amounts without causing diarrhea. It consists of glucose, 15 or 20 per cent.; maltose, 30 per cent., and dextrin, from 45 to 55 per cent. The glucose is absorbed before there is any appreciable fermentation. The dextrin is broken down into maltose and glucose, but apparently not faster than it is absorbed. The low percentage of maltose in corn syrup is well tolerated by these infants. In this series lactic acid milk and corn syrup was the only food used. The feeding was started in most instances with the whole lactic acid milk and the corn syrup after the subsidence of any gastro-intestinal symptoms that may have existed. This was usually in a few days. In a few cases, where the diarrhea was severe, skimmed lactic acid milk was first given and gradually changed to whole lactic acid milk, then later carbohydrate was added. The food was rapidly increased in the absence of gastro-intestinal symptoms. A few babies had a mild diarrhea for a few days but this soon stopped on decreasing the amount of the corn syrup. The amount of milk given was usually increased from 2 ounces per pound of body weight to 3.5 and even to 4 ounces in two cases. The amount of corn syrup added was sometimes 10 per cent. and would have been increased still more as there developed no symptoms of carbohydrate indigestion even when given in large amounts, but it was not necessary with any of these babies as all started to gain when or before the additional sugar reached 10 per cent. Those cases of athrepsia accompanied by a severe drying out of the blood and tissues, a condition termed anhydremia, were sent to the St. Louis Children's Hospital, where food was introduced intravenously or parenterally. The previous feeding history of these infants varied. Seventeen were given after being taken from the breast sweetened condensed milk, three were given proprietary prepared milk. Three were getting insufficient breast milk for two or three or more weeks and were then put on sweet milk modification but developed vomiting or diarrhea. Two were given several kinds of mix-

tures, condensed milk, peptonized milk, barley water, proprietary foods, but with no success. These babies ranged from one-fourth to one-half under the weight of normal infants of the same age. Their ages ranged from 2½ months to 10 months at the beginning of treatment. Some of these babies were kept on whole lactic acid milk and corn syrup mixtures for over four months and made good gains over the entire period. As babies can take more lactic acid milk than sweet milk mixtures it is necessary to give smaller amounts when changing them back to sweet milk mixtures. All these infants continue to gain when taken off the whole lactic acid milk and put on sweet milk formulas. Two typical case histories follow:

CASE 1.—Grace H., aged 2½ months. Birth weight, 7½ pounds. Breast fed three weeks; was weaned because baby was not thriving; was put on sweetened condensed milk four weeks, peptonized milk one week and a whole milk formula for two weeks. Vomited after each feeding and was fretful and wakeful. Had one or two hard formed stools daily. At time of first examination this baby weighed 8 pounds, or 0.5 pound more than the birth weight. It was pale, eyes sunken, there was a small amount of subcutaneous tissue. Somewhat dehydrated. It was put on 16 ounces of whole lactic acid bacillus milk diluted with 8 ounces of water. This was divided into six feedings of 4 ounces each. A feeding was given every four hours. Two days later 1 ounce of equal parts dark corn syrup and water was added. The milk and syrup was gradually increased until the baby at the end of two weeks was getting 150 calories per kilo when it began to gain. It remained on whole lactic acid milk for four months and gained over 7 pounds. At 6½ months the baby was put back on a whole sweet milk formula and up to the present time, four months later, has continued to gain.

CASE 2.—William K. Birth weight 8 pounds 3 ounces. When changed to lactic acid milk at 7½ months this patient weighed 9 pounds 2 ounces, or a gain of less than 1 pound over the birth weight. Was breast fed two and a half weeks with supplementary feedings of whole milk. Was weaned, then developed diarrhea—six to seven stools a day. Was given condensed milk, then given skimmed milk, then was on several different formulas of whole sweet milk, but the child did not thrive and when first seen was a typical case of athrepsia. Several attempts were made to increase the sweet milk feedings to meet the caloric needs of the patient but each time a diarrhea would result necessitating a reduction of food. This baby was first put on 18 ounces of whole lactic acid milk and 18 ounces of water, making six feedings of 6 ounces each, one feeding every four hours. When seen three days later was having one pasty stool daily and the milk was increased to 24 ounces with 12 ounces of water. Three days later 2 ounces of the one-half corn syrup and one-half water mixture were added. The food was rapidly increased to 180 calories per kilo. Patient made steady gains and was comfortable and slept good. Had one or two pasty stools daily. At 10 months—two and a half months after starting whole lactic acid milk and corn syrup mixture—patient weighed 13 pounds, or a gain of almost 5 pounds in two and one-half months.

In summarizing, this paper attempts to convey a conception of athrepsia or marasmus based on the theories and experimental evidence as presented by Dr. Marriott and his co-workers of the St. Louis Children's Hospital.

The essential points brought out are: first, the condition depends on starvation which may be due to insufficient food, vomiting, or failure of absorption because of diarrhea. These in turn result in circulatory disturbances with more or less functional incapacity of practically all the vital organs.

The condition may be prevented by proper attention to the feeding, emphasizing the importance of breast milk or if this is not obtainable, a properly modified cow's milk mixture.

The treatment consists of administering a food which can be given in sufficient amounts to achieve a gain in weight without causing a digestive upset. Breast milk is always to be preferred, but if this is not available an excellent substitute is whole lactic acid milk with added carbohydrate in the form of corn syrup. This mixture can be given in large amounts over long periods of time with the happiest results.

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### DISCUSSION

DR. EDWIN HENRY SCHORER, Kansas City: In taking up this question of summer diarrhea and the question of leukocytes, the one really essential proposition it seems to me is the etiologic factor. As early as 1896 Booker could not find the particular organism that causes this summer diarrhea, though he did believe that the cases in which he found streptococci had most marked and extensive lesions, and those in which he found gram-negative bacilli were least extensive. Then, in 1900, Strong and Flexner found the dysentery bacillus. In 1903 the Rockefeller Institute took up the question and found the dysentery bacillus in a large number of these cases. In 1904 Dr. Knox and I worked out seventy-four cases and found the dysentery bacillus in 58.3 per cent., dysentery bacilli and streptococci in 14.8 per cent., and streptococcus alone in 8.2 per cent. of the cases. We did not believe the dysentery bacillus was the only cause. We found we got the dysentery bacillus very frequently where there was examination made of the stool passed by the patient, while in that obtained by the insertion of a glass tube we could not find it. It is interesting that in dysentery, the same as in typhoid fever, where we have plenty of pus cells in the stools we still have no general leukocytosis. We found that in 65 per cent. of cases the blood agglutinated the organism isolated.

It is an important thing to be able to distinguish between ordinary functional diarrheas and infectious diarrheas. Infectious diarrheas are largely caused by the dysentery bacillus. The question of the part that heat plays is an open one. We know that heat probably lowers the resistance.

As far as the treatment is concerned, I have never felt any hesitancy about using the proteids—skim milk, in feeding these children. I am afraid of the fats. I do use rice and cream of wheat, but I also use skim milk and rice water. In addition to that I use weak boiled tea; and another thing that I find satisfactory, especially when there have been a good deal of tenesmus and straining, and that is fluid extract of witch hazel, a tablespoonful to a quart, for irrigation. Do not give the whole quart at one time, but use 5 or 6 ounces, disconnect the catheter and let the witch hazel run out, then put in some more. I am sure that has always helped.

In our work we try to prepare the children for the summer and avoid some of these cases. I try to get

my children ready for summer by giving them the food they will need by fall by the time the summer months come so I do not have to add a new article during the summer months. I do not worry so much about feeding the children at night during the hot weather, for then you do not have to over-feed them during the day. I give a pretty good breakfast and a pretty good evening meal, and not so much during the middle of the day when it is very hot.

DR. T. C. HEMPELMANN, St. Louis: For many years clinical and laboratory workers have been trying to determine the etiology of the nutritional disorders of infancy, but largely with negative results. The chief difficulty in these studies has always been the fact that the pathologist is unable to help us—the intestinal mucosa frequently shows no change whatever at necropsy. I am referring now to the cases Dr. Lonsway mentions which are different from those of which Dr. Zahorsky spoke. It was not until Dr. Marriott worked out his theory as to the causation of this class of nutritional disorders that we really had a firm foundation on which to stand in the treatment of these conditions. The chief difficulty in athrepsia has always been to get a food which could be increased to the point where the babies would gain and yet not develop diarrhea or other nutritional disorders. We have all recognized for many years that breast milk is the food par excellence for these sick babies. As second choice, however, we use whole lactic acid milk, which is simply "buttermilk" that has not had the butter fat removed. It contains all the butter fat and is therefore almost double the caloric value of buttermilk. With this food the calories can be run up to 150, 250, or rarely, even 300 calories per kilo and the infant not develop diarrhea.

There are one or two other points in the treatment which Dr. Lonsway has not gone into but which are important enough to merit mention. One of these is that whenever these children suffer a sufficient water loss, a drying out of the tissues occurs with a decrease in blood volume and decreased volume flow, and this produces a functional incapacity of many of the vital organs. If the volume flow can be improved by supplying water to the tissue, recovery often takes place. The fluid is given, not by mouth, not subcutaneously, but best intraperitoneally, as normal saline, or better, Ringer's solution. Three hundred to 500 c.c. can be given very easily in this manner. In addition we may inject a 10 per cent. glucose solution intravenously. By this means the blood volume is rapidly brought up to normal and can be kept at normal by repeated injections, the volume flow is increased and the baby's "stage of reparation" is very much shortened. I have seen a considerable number of babies treated according to this routine and I am sure that many have been saved who would otherwise have succumbed.

DR. JOHN ZAHORSKY, St. Louis: The point of my paper was especially to emphasize the value of these microscopic stool examinations. It is a new procedure as far as I know, but it has been so valuable in my hands that I would like someone else to try it.

In the treatment of athreptic infants I have been using instead of corn syrup, strained honey. Honey has one advantage over corn syrup, there seems to be a vitamin in it that stimulates growth and while the babies cannot take quite as much of it as corn syrup, some of them have a better color and grow better. So buttermilk with a malt preparation and honey I regard as a most valuable combination of food for these athreptic infants.

In answer to the doctor's question about the use of opium, I think it should be used in some cases. There is the one thing we try to do in diarrhea, and that is to restrict the loss of fluid from the bowel. If this is excessive, as indicated by watery stools, small doses of opium and atropin are indicated.



DR. M. J. LONSWAY, St. Louis: There is another thing, and that is that the babies do not begin to gain immediately. It will be perhaps two weeks, three weeks, or sometimes six weeks before the babies begin to gain, and the feeding can be run up during that time and the gain hurried. As long as the babies do not have gastro-intestinal symptoms you are safe in running up the food. The doctor should not become discouraged nor should the mother become discouraged.

One of the advantages of corn syrup, as I see it—I do not know exactly the vitamins in honey, but there are probably vitamins in whole lactic acid milk—is that corn syrup is very economical. You can get it for about 10 cents a pound, and you use the same amount of corn syrup as of ordinary sugar.

Constipation is always a good sign in these babies. As long as you do not have diarrhea but just have constipation you can depend on it that the baby is doing well and you need not worry about the constipation.

### THE NEUROLOGICAL REACTIONS IN GONAD INSUFFICIENCY\*

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Whatever relationship may exist between the glands of internal secretion and the nervous system has been subject to considerable investigation within the past few years. Just what may be the nature of this relationship is difficult to state. In a given syndrome which is the primary causal factor, the nervous disorder or the endocrinous disturbance? With the thyroid abundant clinical experiences have shown that psychic trauma plays an important rôle in hyperthyroidism and we also know that cervical sympathectomy has served to ameliorate the symptoms quite as well as removal of the gland itself. The work of Cannon with the adrenals and of Cushing with the pituitary very clearly shows in similar manner the sympathetic nervous system is one of the most important factors at work in the control of the activities of these glands.

No doubt the attitude taken will in large measure depend on the particular interests of the worker himself. To the physician accustomed to looking at the body and its functions in states of disease through the nervous system it is probable that the nervous origin of endocrinous disturbances will appear paramount. On the contrary, the internist interested in endocrinology might be expected to place the nervous system in a place of secondary importance. Such appears to have been the inference in the arrangement of this program, as the nervous symptoms of gonad insufficiency are to be discussed under the caption of neurologic reactions.

However this may be, it is a fact that we are coming more and more to look on nervous phenomena in diseased states as reactions on the part of the nervous system and not as primary disease of the nervous system itself.

A moment's reflection will show that we all have long known what a great effect certain psychic conditions will have on the discharge from the glands of internal secretion. The reverse of this, the effect on the psyche and nervous system of chronic states of glandular overactivity or underactivity, is not so well known or understood and it is this particular phase of the subject dealing with gonad hypofunction which we wish to take up.

In order to have some basis of beginning we will propose that inasmuch as an established secretory disorder on the part of each individual gland leads to certain clinically recognizable chemicophysical alterations in the body it is fair to assume that each of the resultant clinical types will exhibit more or less characteristic mental or nervous deviations. Following along the basis of this assumption we will endeavor to delineate some of the principal neurologic reactions, both nervous and mental, accompanying, or associated with, the varying types of gonad insufficiency.

Before describing the particular types it may be well to insert a few rather general remarks. Although our knowledge of internal secretions virtually had its beginning with the work of Brown-Sequard on testicular extracts we today know little of the neurologic reactions associated with male gonad insufficiency as compared with the female. In the female menstruation has made the development and cessation of gonad activity easy to determine and for this obvious reason much study has been given to the correlation of neuropsychic state and ovarian disturbance. As a result of this, neuroses or psychoses occurring during the puberal and climacteric epochs and in association with the menstrual period or gravidity, have been described. Indeed, some psychoses in their symptomatology have been considered characteristic of the epoch with which they are associated. As a result we have heard of adolescent, menstrual, puerperal or climacteric psychoses, as the case might be. We do not wish to discuss these psychoses here further than to say that they are to be looked on as mental reaction types and not as psychoses in any way characteristic of the epoch with which they are temporarily or causally associated.

Psychoses naturally enough are particularly apt to occur during these periods of physiologic stress during which there are profound alterations in the functional activity of the endocrinous glands with a necessary readjustment in the chemical balance of the body which must in more or less nervously unstable individuals have a deep influence on their psychic organizations. Thus, we may see endogenous psychoses, such as dementia praecox and manic depressive, develop at these epochs. Such, however, are not characteristic of the epoch, but rather are the expression of the individual's constitutional

\* Read at the meeting of the St. Louis Medical Society, Feb. 17, 1920.

psychic make-up brought to the surface by the endocrinous disturbance. Considerable doubt has been expressed as to whether gonad (ovarian) insufficiency can directly cause any true psychosis but rather is it believed that this endocrinic element acts as an accessory moment only. It is not so much out of place here to mention that it is not so very many years ago that ovariectomy was by some strenuously advised as a cure for mental disorder.

One point must now be mentioned. We know that disorder of one endocrine gland does not long exist before other glands are secondarily involved and then we must correlate our neuropsychic findings with pluriglandular disease. In connection with gonad insufficiency, especially in the female, it is only necessary to call to mind its almost invariable association with changes in the pituitary and thyroid and to remind you of the markedly abnormal neuropsychic states met with in cases of disordered pituitary or thyroid function.

The reactions on the part of the nervous system and psyche to gonad insufficiency are less likely to express themselves in psychoses than in fundamental alterations in personality and neuroses of lesser or greater severity. Therefore, the consideration given here will relate principally to these alterations in personality and the neuroses, with but scant reference to the actual psychoses. The types of the neurologic reactions will depend on several factors, primarily the age of onset of the insufficiency, its acuity or chronicity and its extent or degree of completeness.

These factors are all well enough illustrated in the different types of gonad insufficiency with which we meet clinically and it will only remain to set forth briefly the neuropsychic features of such clinical types insofar as we can group the symptoms observed into types. These are eunuchism, eunuchoidism, the late castrate and the climacterium. To bring out these features of eunuchism and eunuchoidism it will be of material assistance to say a few words concerning the mental characteristics of children with particular reference to the alterations which occur incident to the puberal epoch and developing gonad activity.

Prior to puberty there is much similarity of the sexes, both physically and mentally. In the male with puberty there comes a certain degree of unrest and disquiet, at times even a sort of anxiety state. Childish pursuits are given up and interests lead in other directions. In youth there is an indeterminate pressure for doing, an ambition to accomplish great things, world reforming acts are planned. There is a marked trend toward the mysterious, erotism and mystery are always closely associated. This is the age of sentimentality so well pictured by one of our cartoonists in "When a Feller Needs a Friend." Later comes the period when erotism seeks its goal in the opposite sex, the period of

sexual phantasy and desire, and when practical necessities of living are often laid aside for the pursuit of objects of sexual love. We are equally aware of the effects of puberty on the female psyche. The young girl becomes restless, nervous, anxious, at times confused, and often incapable of continued work. It takes months before the state of mental equilibrium is again regained. Associated with the early menstrual periods is often a certain degree of instability and psychic retardation. This period, which in the male and female is marked by a decided neuropsychic instability, is not infrequently the time of first appearance of definite mental or nervous disorder.

In the eunuch, where the absence of the gonads has been congenital, or very early acquired as seen in the sect of Skopzen described by Tandler and Grosz and others, the sexuality does not develop, secondary sex characters are lacking in appearance and the mental state remains puerile, infantile in type. There is absent the normal aggressiveness of the sexually developed person. Mentally, they are quiet, unresistive, to a degree simple and submissive. A very similar condition so familiar to all is seen in the effects of castration in young domestic animals, cattle for instance. Very frequently in these conditions of early agnathism mental enfeeblement is a marked feature, a lack of mental growth and development appears to parallel the gonad insufficiency. Some have reported an actual lack of cerebellar growth. In these individuals states of feeble-mindedness, imbecility or morosity, are not uncommon. Epilepsy is of course sometimes associated with such feeble-minded states.

When we come to consider the late castrate we meet with an entirely different situation. In this type gonad insufficiency is abrupt in its onset and at a period when sexual maturity has been reached. In general it may be said that the neuropsychic equivalents of this agnathism are seen in depressions and apathies. The neurotic symptoms of the late castrate are legion. We are best acquainted with these as they occur in the female and with this difficultly handled patient we are all too familiar even in this day when it should be realized that a complete oophorectomy should be avoided when in any safe way possible.

The nervous symptoms occurring in the late (female) castrate may present themselves at or about the time when the period would occur or they may appear during the interval. Among the molimina climacterica we should mention in the first place the occurrence of pain. The pain is usually of a drawing, crampy character, situated in the lower part of the abdomen or in the pelvis, often radiating down the thighs or quite extensively upward into the back and may at times even occur in the breasts. Occasionally the patient complains of peculiar drawing sensations throughout the whole body. Headache is



at times particularly severe and insistent, usually frontal in location, but oftentimes in the back part of the head and neck. Very frequently more careful investigation of the character of this reported headache shows that it is not so much a pain as a peculiar indescribable feeling of extreme discomfort. These headaches are often associated with nausea, vomiting and other gastric symptoms. Meteorism, a sensation of discomfort and fullness in the abdomen sometimes accompanied by diarrhea and usually associated with a feeling of ill-being and malaise may be mentioned. The more distinctly nervous disorders, or, at least, those which are more frequently referred to the nervous system, include fainting attacks, mental states of anxiety, unaccountable weakness, tinnitus, chills and the like.

Other definite symptoms are the hot flushes which as well so commonly occur during the natural menopause. It is perhaps somewhat significant that these begin not infrequently with a sort of aura consisting of a feeling of pain in the lower abdomen or epigastrium, or sometimes they are preceded by chills, anxiety states or sensations of cardiac oppression and fear. Usually they terminate with a feeling of tiredness and fatigue after lasting from a few seconds to two or three minutes. These hot flushes are not infrequently accompanied by sweats involving perhaps the whole body, but more frequently and more intensely the region of the face, neck and shoulders. The character of these two symptoms very directly and strongly suggest their explanation on a vasomotor nervous basis. The fainting attacks which occur may be of short duration and without complete loss of consciousness. In some, at least, they reach the grade of petit mal attacks with loss of consciousness but without the motor disturbance of an ordinary epileptic seizure. All of these symptoms very strongly suggest a marked resemblance to a neurasthenic syndrome and no doubt many of them are so labeled and thereupon dismissed from further attention. It is possibly somewhat characteristic of this type of gonad insufficiency as well as of that occurring during the natural menopause, that mental states of depression predominate, or at least a depression gives coloring to the general picture. Regarding the onset of these symptoms, most of them begin to occur within three to five weeks after the operation, sometimes not for a few months. They gradually diminish in intensity over a period of four or five months or may continue through several years and then disappear suddenly. In some cases the nervous symptoms are quite mild and do not lead to much complaint from the patient, while in others the most severe and troublesome neurotic syndromes present themselves. They are not characteristic; their true causation usually being arrived at from the history of the case and by exclusion.

With the neuropsychic disturbances associated

with the climacteric in women all are more or less familiar. It has been stated that all women during this period exhibit some degree of psychic abnormality, even that this precedes the other more evident symptoms of menopause as the initial symptom of the change. The general character of these disturbances is in the nature of a depression, a melancholia, but sometimes excitements are met with and occasionally alternations of the two states strongly suggestive of a manic depressive psychosis.

With the depression there is an associated tendency to crying spells, unreasonable irritability, psychic instability and a more or less evident degree of diminution of intelligence. From this basis psychoses may develop not infrequently. With these more definitely psychotic symptoms are present the majority of those of a neurotic character which have been described as occurring in the late castrate. We include here the hot flushes and sweats, gastro-intestinal disorders, fainting spells, anxiety states with vague fears, headaches, pain throughout the body, easy fatigue and unaccountable weakness. We should mention here the occurrence of epilepsy, not in any way differing from the ordinary idiopathic epilepsy other than in its causation by gonad insufficiency.

We are all adequately familiar with the neuropsychic manifestations of the female climacteric but it is not so generally recognized that its counterpart, even in more pronounced intensity, is frequently met with in men. In men between the ages of 47 and 57 there first occurs a lessening or loss of libido and potency, then they become nervous, irritable, restless and have crying spells; all this is accompanied by outbreaks of sweating, hot flushes, cardiac palpitation, weakness, fatigue and insomnia. Sometimes there occur at intervals fainting spells, headaches, and not seldom diffuse pains throughout the body and many paresthesias. Memory is usually somewhat impaired, especially for recent events and names, mental activity is retarded and blunted and the patients give expression to many hypochondriacal ideas. One easily recognizes in this symptom picture of *molimina climacterica viri* the resemblance to the neuropsychic state seen in women during the climacteric.

At the conclusion of this period, both in men and in women, we find a quite different picture. With the transition to asexuality with age there appears a certain recognizable mental tranquillity and peaceful outlook on life, the attributes of a mind no longer in the actively strong producing state. This period represents then the counterpart of that associated with the prepuberal age, in the one gonad activity with its influence on the neuropsychic mechanisms has not developed whereas, in the other such activity has entirely ceased.

University Club Building.

## PHYSICAL DEFECTS FOUND IN THE SCHOOL CHILD\*

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In the compilation of this paper the predominant idea has been to narrate and briefly describe the usual physical defects encountered by the school physician on his tours of inspection and physical examinations in the public schools of the city, particularly from the viewpoint of the relation which these defects bear to the health of the future adult and citizen of the community.

It is the wide range of physical defects which have come to the attention of the writer in his district that have been a continual source of interest, causing me to become more and more alert for any unusual cases while not of course neglecting the regular run of defects. This paper will not concern itself with defects of the nervous system, of the chest, or of the other subjects; papers on which have been allotted to other members of the Division of Hygiene. No special classification was deemed necessary by the writer in this paper.

### TEETH

By far the greatest problem confronting a school physician in a city like St. Louis, is that concerning the recognition, the advising of treatment, instruction anent the care of and the insistence where necessary, for treatment of the defective tooth. It is only of recent years that emphatic attention has been called to the fact that a decayed or otherwise diseased tooth may be more than a local menace to the individual harboring one or more of these. No doubt in conformance with the usual psychologic manifestation of a high strung humanity, we will live to see the pendulum swing to the extreme of this question, as in all else where mortals are suddenly awakened and convinced of their obvious shortcomings.

Certain it is, however, that many serious conditions whose causation was formerly obscure and where the source of the trouble has forced many a consultant to acknowledge defeat, have eventually been traced to a diseased tooth, via the roentgen ray or otherwise. No physician of modern times may be logically termed an able diagnostician who does not give due credence to the importance which the teeth bear to the general economy and to the malinfluence which the defective tooth may exert on the various organs and tissues if continually neglected. An excellent example of the untoward result which may eventuate if a diseased tooth is not given the necessary attention, was unfor-

tunately illustrated in the recent demise of one of the greatest Americans of modern times, Theodore Roosevelt. The actual cause of death was apparently an endocarditis, which, however, had evidently come about as the result of a long standing rheumatic condition which was traced to a neglected molar tooth, long diseased.

The strange ideas and gross misinformation extant among the laity anent the relation of the teeth to the rest of the economy, would be highly amusing indeed were it not tragical from the physician's and dentist's viewpoint; so that obviously one of the most important duties of the school physician and school nurse apropos the teeth, is that of instruction along the lines of oral hygiene and the necessity of obtaining early dental attention as soon as a diseased or defective tooth is discovered; and that one must not wait until the excruciating pain of a toothache drives him to the dentist's chair.

One of the facts which must be made plain to the adult and older children of today is that the teeth, like all other organs and tissues of the body, are directly connected with the blood stream, from which they obtain their nourishment and into which are carried the waste products of the cell metabolism. It will then be comparatively easy to make clear the reason why a diseased tooth is a constant source of danger from the fact that toxic materials are being continually drained from the decayed tooth.

Some of the commoner conditions which may arise as a result of decayed or otherwise diseased teeth are, disturbances of the digestive tract, reflex conditions, particularly of the special senses; a series of symptoms and symptoms complex which are far from being clearly defined and which are usually termed rheumatic or lymphatic diatheses; autotoxemic manifestations; and less often organic lesions of the heart or other organs, which as a rule, however, are the terminal affections. The local disturbances which neglected teeth may cause are usually inflammatory, neuralgic, and necrotic in character.

It is very gratifying to those employed in the Division of Hygiene of the St. Louis Board of Education to be able to show by tangible evidence as well as statistical information that the high percentage of decayed teeth which formerly obtained in the public schools of St. Louis is gradually but surely on the decline; and no doubt with the advent of better facilities for treating indigent cases this percentage will continue to dwindle until with proper hygienic instruction in our public schools the problem of the defective tooth will have been solved.

The writer desires to digress here for one moment to state that there is one argument that he has never been able to controvert; and that is of the child who states that he went to the dentist to have the nerve killed and the tooth

\* Read before the personnel of the Division of Hygiene of the St. Louis Board of Education, Jan. 9, 1920.



subsequently filled, but the pain was such that he had no nerve of any sort left after that to return for future treatments. It is hoped that along with the recognition of the importance of keeping the teeth in good condition, will come an improvement in dental methods that will eliminate at least some of the pain attendant on filling a tooth cavity; for outside of having to live as a soldier in a trench, there are few things that the writer would not venture, at least once, in order to evade the severe pain which he experiences on having a tooth filled.

In the question of teeth as in all else, education must of necessity be the great panacea. The fact that some people get by in life without difficulties of any sort after neglecting continually their important asset, the teeth, simply shows how facile nature really may be in reconciling the human body to exacting conditions and how much abuse she will tolerate before striking; which when she does, however, causes her to exact a proportionately severe penalty. It is strange indeed to note how people will tolerate a badly decayed tooth for years, while these same folk manifest signs of nervous collapse at the incidence of a mere skin scratch and will run for the usual bottle of peroxid in order to ward off the much feared "blood poison."

In concluding the subject of teeth we must not neglect the topic of the serrated, the irregular projecting tooth and the notched tooth known as the Hutchinson's tooth (the notched incisor of the upper jaw), the latter being the manifestation of a congenital lues. The serrated tooth is usually looked on as an index of anemia in many children, although the writer has observed it in apparently well nourished children. Irregular teeth may at times indicate degenerative conditions. In at least one case of prompt recognition of Hutchinson's teeth in a girl attending one of the schools of the ninth district of hygiene, the writer was able to obtain immediate medical attention for the child, who was already developing a keratitis and deafness which often complete the luetic triad. The father in this case came to school and denied that he had ever been affected with lues, but on the writer's suggestion seemed well pleased when told to take active luetic treatment, with the assurance that it might prevent any future sequelae in himself. This case is mentioned merely to show the necessity for being ever on the alert for evidences that will lead to the speedy recognition of a congenital condition that will obviate through our attention, the necessity for a kiddie suffering for the sins of a parent or ancestor.

#### SPECIAL SENSES

Next in importance are those physical defects of the school child which manifest themselves through the special senses; and obviously the eye must receive our first consideration.

The greatest number of affections concerning the eyeball proper and the surrounding tissues are usually due to corneal irregularities, iritic, retinal, and muscular defects, which generally evince their presence through errors in refraction or subsidiary symptoms affecting the nearby tissues. Quite frequently, in fact more often than the average physician would be led to suspect, the school physician meets a class of ocular affections of a leutic nature, in the main congenitally acquired. Of defects of the ocular muscles, strabismus is the worst offender. Some authorities consider strabismus occasionally as a stigma of degeneration. But while this defect is fairly common among mentally defective children, the writer is not at all prepared to sustain this contention as being borne out by his observations. For some reason, strabismus is becoming increasingly evident in recent years. Next in importance come the inflammatory conditions, which, while not saliently classed as physical defects, are so often associated with and so frequently eventuate into serious integral affections that their prominence must not be underrated; such, for example, as often happens in the neglected case of trachoma, iritis, or glaucoma.

Other defects less often encountered are affections due to injuries and some conditions which are merely of passing interest, being mainly significant as stigmata of degeneration; such, for example, as flecks on the iris, chromatic asymmetry of the iris, narrow palpebral fissure; the condition known as albinism or absence of pigment, congenital cataract, which is fairly frequent in the writer's experience, and ptosis (droop lid), of which three cases have presented themselves in the past four odd years. Occasionally a case of pigmentary retinitis appears, but some of the above mentioned conditions so often overlap each other that only an oculist with the aid of sufficient time and proper appliances can make a definite diagnosis, which duty does not fall to the inspector of hygiene.

What concerns us mainly as school physicians anent eye defects in the school child, is the prompt recognition of visual defects and other important obvious conditions enumerated above, so that they may be speedily brought to the attention of the parents. The untoward results that only too often accompany neglected eye defects are of such serious character, involving particularly reflex nervous activity, that the writer has been accustomed to press persistently for action in these cases with the feeling that if occasionally a case eventuates as not requiring special attention, the advice was at least based on a conservative examination and no harm has resulted.

In this connection the writer desires to express his satisfaction at the excellent results which have been obtained by the nurse who is the present incumbent in the ninth district, in

receiving the cooperation of the parents whenever deemed necessary by the inspector. It is hoped that in the future our division will be supplied with some uniformly electrically lighted case that will make the examination of the school child's vision a more definite and convenient procedure. The rules of the board of education preclude the possibility of inserting nails, screws or other contrivances in the woodwork or paneling around the schools, so that in one particular school in the ninth district, where there seems to be an absence of anything but plaster and atmosphere, the inspector has often wished that he possessed the power of the movie actor who seems apparently to be able to attach things to the air; the only other alternative in this building is to suspend an eye-chart from the roof, or to pin it on to another boy's back.

#### EARS

The most common affections of the ear as found in the school child are those following infectious diseases, such as measles and scarlet fever. They usually present themselves for attention through defective hearing or through an acute or chronic otitis. The fact that the ear is one of the terminals of the eustachian tube makes it an important organ to keep under surveillance, for it is often the first organ to give evidence of trouble in the nose or pharynx. Reflex conditions in and around the head are often designated by disturbances in the ear. Impacted cerumen and foreign bodies often find a favorable lodging place in the external canal and if neglected may eventually damage the drum membrane.

It must also be borne in mind that a child with defective hearing is often on that account backward in its studies. Unfortunately, the schools with their noisy environment of city streets and unfavorable arrangement within, do not permit of making an accurate test of the hearing apparatus with sufficient degree of exactitude.

#### NOSE

The most frequent defects encountered in the nasal passages and adjacent areas of school children are those caused by superfluous lymphoid tissue, termed adenoids; deflected septum, hypertrophied turbinates, and the various forms of rhinitis. The most frequent condition seems to be that of the adenoid growth. This condition concerns the school physician mainly from the fact that the untoward results which accrue eventually from the presence of a large growth of adenoid tissue are sufficient to retard the school child physically and mentally.

In a general way the ill effects of adenoids may be divided into those conditions resulting from the mechanical obstruction to the respiratory process and to the adjacent areas with which the nose communicates, the reflex condi-

tions which may evince themselves through the nervous system and to the deleterious effect on the child's nutrition. The chief symptoms which the school physician observes where there is a large growth of adenoid tissue acting as an irritant and obstructant are, chronic nasopharyngeal catarrh, difficulty in breathing through the nose, giving rise to mouth-breathing; deafness, various other ear disturbances; signs of mechanical obstruction, general malnutrition, mental torpor, and reflex phenomena of the nervous system.

Children in whom the condition has been marked and neglected for a long period often assume what is known as the "adenoid expression," which is characterized by a droopy, listless appearance of the entire facial expression and in some cases of extreme character; deformity of the upper maxillary bones is not at all uncommon. Chronic rhinitis and the more acute conditions must be carefully eliminated as a rule before a diagnosis proper can be made of a fundamental defect. The deflected septum is very common, but specialists invariably advise delaying operative interference in these cases until puberty. Occasionally one meets with a child who has a strong nasal voice which might lead one to suspect adenoids but which simply designates a postdiphtheritic paralysis. Mouth breathing is not always a sign of adenoids. Hypertrophied turbinates unless obstructive in type are as a rule best ignored.

The most conservative opinion regarding the removal of adenoid tissue seems to be that they should be operated on when the following symptoms become evident: habitual mouth breathing, nasal voice, disturbed sleep, chest deformity, chronic nasal discharge, repeated attacks of coryza, affections of the larynx, deafness, repeated attacks of otitis, and for certain reflex symptoms which often have their origin in the area of the adenoid tissue, such as enuresis, stammering, chorea, night terrors, headaches and other manifestations through the sympathetic system. It is the writer's custom to call the attention of the parents to every case of adenoids where there is any one marked symptom of their presence and to press persistently for special attention where several symptoms obtrude. The operation for adenoids by the skilled hand is an extremely simple procedure, whereas adenoids have never done any good so far as any one can estimate. After many observations during four years of school inspection and eleven years of general practice, the writer is prepared to make the statement that the physician or any one else who thinks that adenoids may be removed through medical treatment when once they have become fixed in their position, is suffering from inexperience and is under a serious delusion. And yet ever so often the writer is accosted by a note from a general practitioner that a certain child need not be



looked after by the inspector of hygiene because he is now under medical treatment for his adenoids and will soon be all right.

#### TONGUE

Defects of the tongue among school children are comparatively rare. Congenital lues is sometimes evidenced through white plaques which might be mistaken for a simple stomatitis. The speech defects which are frequently met with have their origin as a rule in the brain. Very seldom does the frenum linguae appear to play any rôle in the speech defect. The writer encountered only one case of lymphangitis in four years.

#### THROAT

The pharynx concerns the school physician mainly on account of its harboring the tonsils. Even more than adenoid growths are the tonsils a prolific source of many ailments. Placed presumably as guardians of the entrance to the esophagus and the windpipe, these glands of the fauces seem to have fallen down in their line of duty, as far as protection seems to be concerned in a great many children of school age. And their existence might well be termed paradoxical; for instead of serving as guardians they seem to be a continual source of worry to the child and to all who are concerned in the child's welfare wherever they are very much in evidence.

Hypertrophied and troublesome tonsils interest the school physician mostly through the effects that their presence may produce on the health of the school child. The aim of the hygiene department in St. Louis has always been to maintain a conservative attitude toward the enlarged tonsil until its presence began affecting the school child's health and retarding its school work. The longer one deals with this troublesome phase of tonsil enlargement the more conservative one becomes in advocating their removal; although, as in the case of adenoids, it is hard to conceive of any good that an enlarged tonsil is accomplishing from a physiologic standpoint. Hypertrophied tonsils are in a majority of cases (about 80 per cent.) accompanied by adenoid growths; and it is difficult in these cases to differentiate which of the two is producing the disturbing symptoms, for they are very similar in many respects.

The most prominent symptoms occasioned by large tonsils are: mouth breathing, disturbed sleep with snoring, defective speech as if the child had some food in its mouth while speaking, and difficulty in swallowing. The change from an enormously enlarged tonsil to an almost invisible one is often so phenomenal that one sometimes doubts his memory and his diagnosis. In a general way it might be stated that where the tonsils are causing symptoms due to mechanical obstruction and are repeatedly flar-

ing up with an acute inflammation, they should by all means be removed. It must be remembered that notwithstanding our desire to be neutral or even conservative in these cases, the continually diseased tonsil is very apt to complete the vicious circle which embraces chorea, rheumatism and valvular trouble of the heart, often terminating in loss of life. Of recent years enlarged tonsils are being looked on as harbingers and propagators of infectious diseases, such as diphtheria, scarlet fever, etc. Not all cases of tonsil trouble are due by any means to the enlarged tonsil, for the small, diseased tonsil is at times more of a disturbing element than its large compatriot.

#### HEART

The most common lesions of the heart met with in the school child are those which are the result of an early endocarditis which as a rule has followed rheumatism or a choreic involvement. Sometimes, though less frequently, a heart defect will follow an infectious disease of childhood. The mitral valve is the most frequently affected. The school physician is not infrequently asked to excuse a child from all gymnastic work wherever there is a heart lesion present. It has been the writer's custom to accede to this request where a note was brought from the attending physician making the suggestion. The writer, however, has always felt that it is far better for the child with a heart lesion of medium intensity to indulge in some light gymnastic work in order to preserve the tonicity of the heart muscle that is intact rather than to have the entire organ become flabby through a complete sedentary life.

Various forms of arrhythmia, hemic murmurs and other irregularities are encountered frequently, so that at times it requires a good deal of diagnostic concentration to differentiate and eliminate. The writer, through observations carefully studied, feels that the indiscriminate use of coffee and the rapidly increasing habit of cigaret smoking among boys are playing a competent rôle in the production of nervous and organic lesions of the heart among school children. Obviously, however, we will never be able to combat these conditions until there has been established in the course of study of the grade school curriculum a well defined course of hygienic instruction adapted to the needs of the pupils for the corresponding grades.

#### BLADDER

Fairly often the school physician will encounter cases of incontinence of the bladder. These are in the main attributable to congenital defects, although now and then the cause is a cystitis, acute or chronic. If of nervous origin the underlying irritation may at times be discovered in a remote part of the body.

## PHIMOSIS

This condition is encountered as a rule only when the parents have brought for the inspector's attention some nervous or other phenomena of unexplainable origin, desiring to know whether the case warranted the consultation of the family physician; or where there is an obstruction to the regular physiologic channel.

## HEMOPHILIA

This state of the blood stream which depends on a lack of the clotting principle of the blood content, and is congenital in character, usually comes to the inspector's attention through the frequent hemorrhages which the child experiences, and at the slightest untoward incident. All cases of hemorrhage in school children are carefully observed until it is definitely ascertained that the child is not a hemophilic.

The above represents the regular run of physical defects which the writer has encountered in a steady performance of duty as inspector of hygiene for the St. Louis Board of Education in a district containing approximately 6,000 children, mostly of the lower and middle classes. In compiling this paper no authorities were consulted as the object of the paper is to relate the actual experiences of the writer who offers the contents for what they are worth without claiming any special credit except that of achievement in the faithful performance of duty.

5101 Delmar Boulevard.

# HIGH BLOOD PRESSURE AS A CAUSE OR FACTOR IN INSOMNIA\*

J. F. CHANDLER, M.D.  
OREGON, MO.

The fact that nothing more completely incapacitates one for mental or muscular effort, especially the former, than the loss of rest (sleep), it behoves us to make every effort to bring about sleep—natural sleep—when insomnia exists. To be able to do this it is necessary that we consider the different factors or causes which take part in producing insomnia. Insomnia may arise from many causes, as we well know, but the fact that I have but recently learned that high blood pressure is a cause which may escape the attention of the clinician, is my reason for introducing the subject. Not the only reason, however, the other being the fact that I hope to bring forth discussion from the members present and thereby be myself enlightened.

You are to understand that my subject is high blood pressure as a cause or factor in insomnia, not insomnia. I am aware that excite-

ment may bring on high blood pressure and likewise insomnia. Yet we may have sleeplessness from excitement, or worry, with little if any change from normal blood pressure. On the other hand, if we find high tension existing we may, by reducing the blood pressure, bring on natural sleep, which we would fail to do did we not know of the condition existing. Therefore when insomnia exists I take the blood pressure.

I have made no attempt to make an exhaustive study of the subject and will content myself by directing your attention to some thought along the line of high blood pressure as we find it in insomnia.

It is a well known fact that less sleep comes with the approach of years and that blood pressure increases with age. We are told by authors that blood pressure is low during sleep, the cerebral circulation diminished during slumber, and that sleep, immediate and profound, may be produced by compressing the carotid arteries. When the circulation to the brain is interfered with by compressing the veins congestion is the result and we have stupor or coma. During natural sleep the circulation is slower, pulsation of the heart less frequent, respirations slower and not so deep, and muscular relaxation exists. The surface of the body has an increased vascularity, there is lower arterial pressure and smaller central circulation, the brain anemic. This being true, and we find the opposite condition in high blood pressure, we take it that, to relieve insomnia with high tension our treatment should be directed to high blood pressure, its cause, if we would expect to bring rest to our patient. Sometimes in old age there is an obstinate insomnia which is due to changes in the blood vessels of the brain, the result of which is high blood pressure and inability to sleep. Reducing the tension by administering nitroglycerin or nitrites gives relief. I have seen relief come to an old man suffering from insomnia due to high blood pressure, by taking up his abode in a higher altitude. The change seemed to be permanent. Insomnia may be a symptom of high blood pressure and should lead one to investigate.

I have been accustomed to giving bromid of sodium and hyoscyamus for insomnia, for the reason that I would avoid habit forming drugs and those considered unsafe owing to the depression that may follow and endanger the heart. Failing in a few instances to get results from the treatment given, I took the blood pressure and learned that my patients were suffering from hypertension. On adding nitroglycerin the patients fell asleep almost immediately on retiring, resting well throughout the night, except one old gentleman who awoke about midnight to lie awake the remainder of the night. I repeated the nitroglycerin when he awakened the next night with the result that he lapsed into slumber and rested throughout the night.

\* Read before the Holt County Medical Society, Oregon, April 1, 1920.



# THE JOURNAL

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## Missouri State Medical Association

AUGUST, 1920

### EDITORIALS

#### SPLENECTOMY

Since the surgical removal of the spleen first occurred several decades ago, this operation has become more and more popular until today it is not a rarity in any large clinic. In fact, some surgical enthusiasts desire to remove every enlarged spleen with which they come in contact, which observation reminds us that, before removing any viscus, we should seriously consider the functions of that organ, the indications for and the results of removal.

The functions of the spleen are probably not fully known. However, one of the latest works on physiology gives to the spleen the following functions: (1) the formation of white blood cells; (2) in embryonal life, the formation of red blood cells, and (3) disintegration of red corpuscles. In addition, the spleen aids somewhat in the formation of uric acid and it seems to act as a vascular reservoir to the digestive organs and to the portal circulation.

The general indications for splenectomy are the following splenic conditions: wounds, rupture, and an abscess which cannot be drained; movable, or wandering spleen; in cases of malarial splenomegaly; primary tuberculous splenomegaly; syphilitic splenomegaly, when this condition begins to resemble splenic anemia; Gaucher's splenomegaly; splenic anemia and splenic tumors, excepting sarcoma. This operation affords some relief in some cases of pernicious anemia.

Following the removal of diseased spleen, because compensating organs are already at work when the operation takes place, usually no symptoms result.

However, when a normal spleen is removed, as following an injury, etc., there occurs a certain train of symptoms, such as: pain in the head, arms, abdomen and legs; fainting, drowsiness, loss of weight; polyuria, thirst and an increase in the temperature and pulse rate. There is also a diminution in the amount of hemoglobin and in the number of red corpuscles. Along with a leukocytosis, there also occur a greater cholesterol content of the blood and a greater resistance to hemolytic agents.

#### SUMMER DIARRHEA OF INFANTS DISAPPEARING

There has been nothing more gratifying to the physician interested in public health, and nothing more indicative of the trend that medicine must take in the future, than the gradual disappearance of the so-called "summer diarrheas of infancy" which has taken place during the last ten years. Some fifteen years ago our medical journals were filled with discussions of the high infant death rate which, it was pointed out, was in large part due to the intestinal diseases that reached their maximum during the hot summer months. Elaborate bacteriologic investigations were made regarding the rôle of various micro-organisms and the results of innumerable clinical studies were published. The warmth which was generated about the moot question of the "influence of heat" was only equaled by the temperature of our hottest summer days. And today we know almost as little from the standpoint of pure science in regard to these matters as we did ten years ago. Despite this fact there has been a gradual lessening of the number of cases each summer until today—midsummer, 1920—there is not a single case of diarrheal disease or ileocolitis in the infant wards of the largest children's hospital in St. Louis.

This result has been brought about by the campaign for the education of both the physician and the mother in the care of the infant. No longer is it the province of the physician to wait until the infant is brought to him prostrated with an enteritis, but the physician has learned that it is his duty to guide the feeding of the infant so that these diseases will not develop. More and more we are learning that the health of the infant depends on a few simple dietetic rules. First and foremost, breast feeding at not too frequent intervals. The campaign for maternal nursing has led to a decided increase in the number of infants who are receiving their normal food. Today over 75 per cent. of the infants of St. Louis are fed in this way, and there is no reason why this figure cannot be increased to 95 per cent. Secondly, when an infant must be fed in an artificial way, the simplest feeding is cow's milk, diluted and boiled, together with the addition of some simple antiscorbutic substance, such as orange juice. In summer in particular, boiled water which has been cooled (not iced) should be given frequently between feedings. In an infant under 9 months practically every other type of food should be avoided during the summer months. In infants over 1 year only the simplest foods,

such as boiled cereals, cooked fruits, and an occasional egg, should be given. An infant should never be weaned during the summer months. Another important factor is the avoidance of over-dressing. On a hot summer's day the infant should be protected from flies by screens and allowed to kick about at freedom on the bed with only the diaper for clothing.

It is by adherence to these few simple rules or directions, which even the densest mother can understand, that the tremendous lowering of diarrheal diseases of infants has been brought about. The one other factor which must be driven home by the physician is, that at the slightest indication of upset digestion all food should immediately be stopped by the mother and the infant taken at once to a physician.

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### PILLS AND GRAND OPERA

The attitude in this country at present is to hamper and to cripple, as far as possible, those industries which have for their main object the putting forth of pills and powders and liquid preparations of such superlative and varied qualities that they needs must be the specific agent for the cure of a number of diseases, some of which we know to be incurable and some of which we know will stubbornly refuse to be subjugated by the pill, the powder, or the liquid. This attitude is not to be criticized, for it is the right attitude, since by its watchfulness and its incessant criticism and exposure of frauds it is most effective in bringing to the slow-thinking and easily led-astray practitioner illuminating thought. And equally of value is this attitude for the intelligent quota in our population, which we are always hopeful is an influential factor in our progress toward light and reason, but which we regret to say, is at times most disappointing as a help in our efforts "to clean up medicine." Nevertheless, the attitude on our part is a commendable attitude even without the assistance of the intelligent quota, for by our constant look-out for those who are unscrupulous we achieve ends which benefit the public. And yet at times some good may come out of evil—at times a great good—and a large industry that has fattened on the credulity of the public may set itself at rights if the head of the firm does the clean-cut act that is completely divorced from sycophancy and has nothing to do with church-giving or the desire to have his name blazoned forth on the roll of donors to universities or colleges. The instance we have in mind and which at present is attracting a great deal of attention

in England and considerable attention in this country, is the really mild instance of Sir Thomas Beecham, son of the originator of the "factory" that makes "Beecham's Pills." We say "mild instance," and we say this for two reasons—in the first place, "Beecham's Pills" set forth their "marvelous" powers in a modest fashion; and, in the second place, Sir Thomas Beecham is not assuming the rôle of sycophant before the British public, but the rôle of an exceedingly modest man gifted with an undeniable talent for music and a set purpose to educate the rank and file of the British public along musical lines. Hence, it is meet that we should comment on this man.

In the case of Sir Thomas Beecham we do not note the attitude of millionaires and philanthropists of the sort whose money has been accumulated in an approved manner—the "grand" attitude, so to speak, the giving of a million or two to a university or college or hospital so that the name of the donor shall be cut deep into the lintel over the front entrance. But we do note two salient features which should arrest our attention. Sir Thomas Beecham, being a finished musician and an out-of-the-ordinary conductor, conducts nightly the English Opera Company, which he finances altogether, and his earnestness and modesty are of so high a degree that he seeks no newspaper notoriety for his indefatigable work nor invites the attention of other conductors of opera in England (mostly foreigners) for praise or condemnation. His endeavor is to bring back to all English people their regard for music, which regard has been lost across the ages; and his idea is that by financing and conducting his own opera company in the production of operas sung in the English language his ends will be achieved. That he is right is being attested in London today by the growing popularity of his opera company, by the sane criticism which the leading newspapers are bestowing on him, and by the support he is receiving from a public which hitherto kept away from opera sung in Italian.

When a philanthropist of the modest proportions of Sir Thomas Beecham appears in a community, much can be forgiven him on account of the sources whence came his money. Earnest endeavor should always come in for praise, but when earnest endeavor is grounded on modesty, hard work and no sensational attempt to wipe out a somewhat disreputable past (in Sir Thomas' case, the past belongs altogether to his father), our praise should take the form of laudation. It is a decidedly easy task for "nice" or "unnice" millionaires to give



in their old age a million or two to some pet institution and thereby achieve some immortality; but it is not an easy task to open one's coffers daily in support of opera (probably the most expensive undertaking known to man), sit in the conductor's chair night after night, and be the kind and courteous "pacifier" of the warring elements which invariably go to the making of an opera company. This Sir Thomas Beecham has done for a number of years; hence, a congratulatory note should be ours despite the fact that the money to finance the company emanates from the "factory" which turns out "Beecham's Pills" by the thousand and saves the British nation from "torpid livers."

P. S.

### CERTIFIED MILK

It is the desire of the St. Louis Pure Milk Commission to publish information concerning certified milk from time to time which may be useful to physicians, to whom a pure and reliable milk supply is of special importance. As is generally known, the St. Louis Pure Milk Commission was one of the first commissions to come into existence in this country for the purpose of supervising and directing the production of a high grade of milk suitable for infant feeding and for the sick. It was organized Feb. 6, 1904, and incorporated on March 5, the dedication of the laboratory from which the field management is directed being held on June 28 of the same year. With the exception of salaries paid for the services of a secretary and the employees engaged in the preparation and modification of milk, the commission has served the community without profit to any of its members since that time. In 1908 it became a member of the American Association of Medical Milk Commissions and has been officially represented by a delegate at most of the annual meetings of that association. The certification of milk is governed by a committee known as "The Certification Committee," composed of the following: Drs. Sam T. Basset, Frances L. Bishop, Adrien Bleyer, R. L. Cook, John C. Falk, W. W. Gilbert, T. C. Hempelmann, P. G. Hurford, M. J. Lonsway, Julius Rotteck, Hudson Talbot, George M. Tuttle, Borden S. Veeder, P. J. White, Jr., John Zahorsky and Messrs. Thomas Buckland and H. E. Mortland.

With the approbation of the St. Louis health department and by virtue of an ordinance granting the privilege of having examinations made by the city of milk intended for local use, chemical and bacteriologic examinations have been made weekly without cost to the commission

throughout the past fifteen years. Chemical examinations include the determination of the fat percentage and the total solids not fat, the percentage acidity and, when indicated, tests for adulterants or preservatives; bacteriologic examinations are directed to the determination of the number of nonpathogenic bacteria present. These measures we believe afford a rigid check on the degree of cleanliness existing at the dairy as well as on the methods used in procuring, handling and transporting milk. The bacterial standard is that of the national association, namely, 10,000 per c.c. At times this number has been exceeded but such occurrences have called for an investigation which has usually been productive of finding at some point an item in the control of the milk which could be improved on. The milk is bottled on the farm, a cap on the bottle bearing the day of milking. Certification is granted the dairymen for periods of one month only and is renewed when it is deemed proper to renew it by the certification committee at meetings which are held monthly. In only one instance in the history of the St. Louis commission has it been necessary to suspend the approval of a dairy which had been granted the privilege of selling certified milk.

To all the distributors as well as to the producers the certification committee takes pleasure in expressing its thanks publicly and its commendation for the sustained efforts and care which they are putting into their work. The names and locations will be found on another page.<sup>1</sup> The price of certified milk at this time is 12 cents per pint and 22 cents per quart.

### THE PUBLIC HEALTH PHYSICIAN: PAST AND PRESENT

Time was, that a physician who engaged in some branch of public health service, local or national, was very apt to be in uncomfortable relation to the rest of the medical community—those who were following the beaten path of the regular or the specializing practitioner. If the medical profession in the aggregate were divided into Carlyle's three estates, then the physician doing public health work in the past would no doubt by common consent have been accorded a place in the lower strata. The reason for this is not far to seek. Public service in the past, in medicine as well as in other paths than medicine, was always associated with political influences with all the baneful suggestions concomitant with that atmosphere; at least it was so in the minds of those not thus engaged.

1. See page 344.

A medical man taking service with a board of health, or with some other branch of eleemosynary institutions where a recompense was involved, was considered to have taken the easiest way; or perhaps because "he could not raise a practice." Of course, one must not lose sight of the fact that in certain branches of the public health service the authorities did not always cater to obtaining the best personnel available on account of the meager salaries involved. In using the term "public health service" we do so in the large and general sense, and not as referring to the particular branch of the government agency under that name.

Times have changed; today, Harvard and other like universities are offering courses in public health with a degree to those willing to devote a sufficient number of years to the subject. Hygiene and sanitation are coming in forcefully, now that the real significance of preventive methods are beginning to be appreciated. The corollary, so eloquently exhibited in the consummation of the Panama Canal, has borne fruit. The large number of physical misfits which presented themselves before the draft boards in response to the conscription act, gave Uncle Sam a rude shock, but it taught him a lesson he will not easily forget, as is evidenced by the extraordinary efforts being put forth to conserve the physical welfare of our youth.

As a result, there is a virgin field of opportunities calling to physicians to enter this realm of medicine. The opportunities in the line of industrial and other branches of hygiene and preventive medicine are promising not only from the viewpoint of dignity, but by logical ratio one may conclude that as prevention flourishes there will be less need for curative methods, so that manifestly as the recompense dwindles in the latter field it will increase in the other. No doubt it will require another decade or two for the transition to pass into the well established fact, but there is even today clearly heard the call for "human engineers" in large industrial plants. The United States Public Health Service and the American Medical Association are clamoring in no uncertain manner for medical inspection in our public schools; and let us not overlook the large field of sociologic endeavor wherein is required, quite naturally, the physician with specialized public health knowledge.

For many years past there has been an increasing feeling among the medical men of this country that our profession should be represented with a Secretary in the President's Cabinet at Washington. This will no doubt eventuate in the near future and will tend to increase

the necessity for physicians of the public health type. The conditions surrounding school children from the hygienic viewpoint in the greatest part of the United States forms a large blot on our state and federal escutcheons. At the present writing Massachusetts is the only state in the Union that can boast of competent laws in this connection to reach every part of the vicinity within her boundary lines.

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## PHYSICIANS AND SURGEONS EXCHANGE

This is the age for complaints. We complain about the high cost of living and about the many worries which beset our life from morning till night. We think we are sorely tried and that in no other generation was man ever so harried by innumerable little things which we imagine our own supercivilization bears in its train. The worries of today are really not more manifold than they were in the past, but human nature is just the same and, as we all know, human nature is about the most unadaptable thing with which mortals have to contend. To illustrate: An acquaintance does a certain thing in a certain way and directly his manner of doing the thing finds at least one imitator, then this one imitator spreads the glad tidings and before long hundreds have adopted the method. The method may have its faults, but these are never detected, for the reason that when the time arrives for a close scrutiny of them the imitators are legion and a ready acceptance is in force. To question the efficacy of the method at that time would indeed be considered sacrilege; for are not hundreds, perhaps thousands, using it, with no whimper of complaint except from those who are always dissatisfied?

Take, for instance, the telephone. What has not been said against the telephone by all sorts and conditions of people—even by doctors who are supposed to have the patience of Job and to be models of the noncomplaining sort. Men and women now bless the telephone (in case their messages do not go astray) and then denounce it (in case their messages go astray), are polite and amiable (in case the right number is understood and connection is made) and are the opposite (in case the right number is maltreated and the connection is wrong). Inefficient telephone "help" is blamed for the exasperating moments and loud are the denunciations. The complaints are not unjustified; but, even so, what goal that will smooth the tossings of our daily wrath is effected by complaining to headquarters or over the telephone to



the young woman who reigns supreme over the inner workings of the switch board? Absolutely no goal of content is reached, but, as was said above, human nature once it acquires a method is loath to give it up despite inconveniences.

As regards the telephone situation as it obtains today with doctors, a light, a very strong one, is about to scatter the darknesses which are daily increasing around this problem and making only for ill-temper and extreme dissatisfaction. This light will be cast by the Physicians and Surgeons Exchange which shortly will be started in St. Louis and to which all physicians who are at present the victims of ill-temper on account of undue waste of time at the telephone should lend their support. The Exchange will take care of the doctor as he has never been taken care of before. Directly he leaves his home in the morning, all that is necessary is for him to telephone the Exchange where he intends to go and for how long. A record is kept of this, and directly the doctor desires the Exchange to know his whereabouts afterwards, a new record is made. No matter how often the doctor telephones the Exchange, the record is changed, and this pertains not only to the daytime but to all hours during the night. In short, the Exchange is the unremitting repository of the doctor's zigzag journeys throughout the day and night, and no help will be required by the Exchange from the hitherto sorely tried wife, who was wont to allow herself to be chained to the telephone at home, or from the rather ignorant servant, who, in case of the wife's absence from home, was called on to exercise great versatility between her duties in the kitchen or in the "front part of the house" and her duties at the telephone. Every doctor's wife has a dismal tale to tell of long hours in constant duty at the telephone and of many exasperating moments trying to make the young woman in charge of the switchboard understand the number and then, even when the right connection is made, fail to get her husband at the house where he said he would be at a certain hour. As for what servants have had to endure when their inefficiency calls forth unkind remarks from the doctor, when tired and not in the most pleasant mood he returns home to find an urgent call awaiting him and which he feels should have been telephoned him by the servant some time before his return home, history is silent. Family jars are not pleasant but jars with servants are too commonplace for Clio to record.

The Physicians and Surgeons Exchange bids fair to do away with all the disagreeable chap-

ters in the doctor's "telephonic" life. It will "father" him, so to speak, relieve him of all thought of the possibility of a mistake on the part of his wife or the servant, and watch over him as only a kindly father can watch over his son. His wife may miss the drudgery and the servant may miss the reprimands and both may be quite unhappy because, as Othello said, "their occupation is gone." But we are sure the doctor will be happy on account of the "interference" of the Physicians and Surgeons Exchange.

#### DR BAILEY WINS PHYSICIANS' GOLF TOURNAMENT

When Dr. Hanau W. Loeb organized the St. Louis Physicians' Golf Club a year ago and entertained the members at its first dinner, he undoubtedly increased the number of holidays in that city by one, at least for physicians, and perhaps provoked a sort of rivalry that will produce innumerable half holidays for some of the members of the club. Of course star players like Bailey, Ravold, McKay, Paine and Soper—those in the 80 and 90 class—make no secret of their practice games, but how many afternoons will be sacrificed to lonesomes and twosomes in a mad effort to bring down a score of 120 to 88 with only the green and the ball sharing the secret, none will ever know.

The tournament this year was won by Dr. F. W. Bailey with a score of 83 and a handicap of 6. Dr. Charles was second with one stroke less than Dr. Elmer who took the third prize. (We recall now that we tried to reach Elmer at his office on several afternoons early in June but he was "not in.")

The match was played at the Glen Echo Club on June 11 with forty-three members playing. Some of the features of the game were Downey Harris' driving and Scherck's mashie work, while Marchildon's left-handed stroke with right-handed clubs kept the gallery in good humor.

Every one enjoyed the dinner, but the post-prandial business seemed tame and lifeless because, so thought some of the members, they had stupidly forgotten to slip some prescription blanks into their golf togs. However, Sale's annual story relieved the deadly monotony for a fleeting moment.

Dr. E. H. Higbee is president of the club and Dr. H. S. McKay secretary. All physicians are eligible and will be enrolled on application to the secretary. The score will be found on another page.<sup>1</sup>

<sup>1</sup> See page 344.

## THERE WAS A MAN!

WILLIAM C. GORGAS, M.D., LATE SURGEON-GENERAL, U. S. ARMY (RETIRED)

"There was a man sent from God:" In mind and heart and soul, in science, intellect, and work; in the vastness, self-sacrifice and importance of his labors for mankind there was none to stand before him.

Conceived in the spirit of consecration to truth and devotion to his kind; born to an empire of sane intelligence and supreme imagination; richly endowed with the instincts and purposes of science, sympathy and skill; ever observing in professional work that fiat of law by which man is bidden to prove all things and hold fast to that which is good: the professional record and personal example of the late Surgeon-General Gorgas are gifts to the world of luminous quality, and must ever prove to be of exalted and enduring value to those who come after him, walking and working in ways that are truly scientific and helpful.

In the issue of *THE JOURNAL* of July, 1918, in the course of editorial comment on the near approach of the date for his official retirement from army service, some of the main features of his character were thus sketched:

"Chief priest of preventive hygiene, world-wide in scope; apostle of scientific medicine whose hallowed mission is salvation of everything that is human out of the wreckage and calamities of war—life, limb, soul, reason, health; and, as one dedicated to this divine purpose, future ages will fully recognize the abiding service of human help and deliverance abundantly rendered by the Surgeon-General of the Army—some of the chief pestilences that walk in darkness and waste at noonday having been finally overthrown through his commanding scientific abilities. . . .

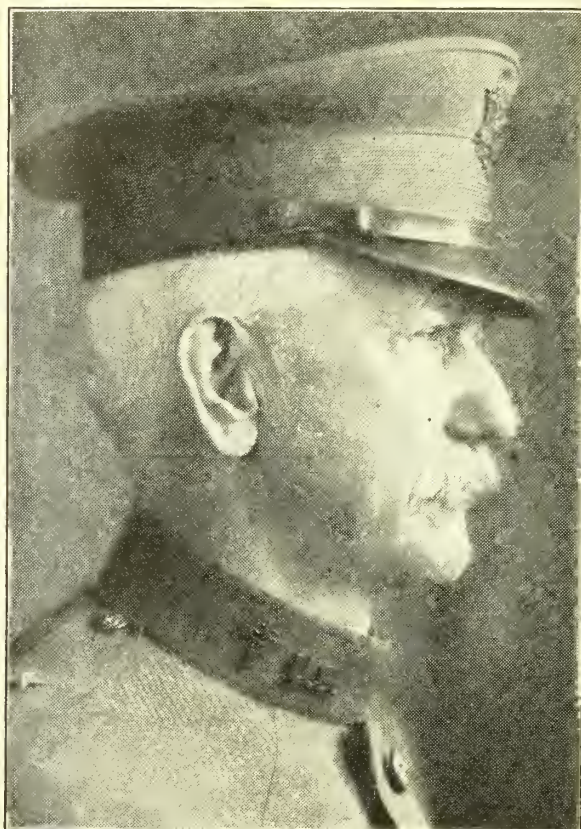
"A man of gentleness, a master in medicine, a physician in every sense, a minister of mercy, a scientist known all over the world, Dr. Gorgas is a tower of strength in the cause of humanity; and a great multitude . . . will join in the prayer and sincere hope that he may long be spared to carry forward the work for which he is so eminently fitted."

But this hope was not to be realized as his physical career came to a close in England on the last anniversary of his country's birth.

Although Dr. Gorgas has been spoken of as a soldier it is not believable that a man thus wholly dedicated to the service of humanity could have had any sympathy for militarism as of late it has been so hideously revealed by its

accepted exponents — the monstrous Gorgon whose visage brought blight and death to those on whom its gaze might fall.

As a minister of the benignities of heaven he was confronted by influences that wielded the malignities of hell; and it is no small part of his high distinction that an official connection with a military calling added nothing to his luster as either scientist or man. He would have been truly great in any line of scientific work that came under his hand—the army position merely presented an open door to fields that were ripe for the reaping; and he, with his co-workers,



*Courtesy Jour. A. M. A.*

WILLIAM CRAWFORD GORGAS, 1854-1920

promptly saw and seized the opportunity and won an abundant reward—not through mortal slaughter and sufferings, but in human succor and salvation, the peaceable fruits of scientific righteousness. By the power of moral qualities, intellectual endowments, and scientific principles he was able to lift his official calling to a level never before attained, embarrassed as it has ever been by a biologic heritage that harks back to ages primitive, violent and brutal.

Another element of distinction in Dr. Gorgas' character was that, as chief priest of preven-



tive hygiene—supplementing his expert knowledge of all the forms of microscopic life harmful to human welfare—he went deeply beneath the surface of things seeking the cause that favors diseases among populations. He saw clearly and dealt directly with the social and economic factors that injuriously affect public health. He showed that the poverty, want, destitution, everywhere so common were the direct, necessary consequence of economic wrongs to the millions through privilege, cloaked with the forms of law, gathering where it has not sown, appropriating land values that are created by all but wrongfully perverted to the uses of the few—with consequences to population health that can be seen by any one who will study the subject with unbiased mind seeking simply to know the truth.

Such a life, so rich in its beneficences to the human race, can never die but will go on and on, receiving the grateful acknowledgments of a world made better by its work and example. The number of human beings who have not died from diseases whose course was overborne or checked by him—as yellow fever, typhus, malaria, hookworm, bubonic plague—can never be fully known, but may be estimated from the multitudes in every land who perished before that time. What profession other than that of medicine has brought forth fruits for human weal so striking in clear conception and admirable in executive action as attended the labors of this gifted leader, directed as they were by wide knowledge and an inspired enthusiasm that bespeaks the primitive meaning of that word, “God within!”

The fact that the world is becoming more and more keenly conscious of its debt to the medical profession through the example set by the labors and successes of such a man tends to lessen somewhat the force of the blow that has been felt in the departure of Dr. Gorgas from the activities of this life, for he is, and ever will be, one of the Immortals of mankind, not a destroyer but a savior, and who will stand with that illustrious company whose names live forevermore. GEORGE HOMAN, M.D.

#### IN MEMORIAM HOMINIS

Gustav Adolf Friedrich Wilhelm Alt was born in Mannheim, Duchy of Baden, Germany, Aug. 13, 1851. His father, Dettmar (likewise a physician), and his mother, Maria, were of substantial German stock. The usual preliminary gymnasium curriculum, followed by a period at a boarding school within the Black

Forest, led to matriculation at Heidelberg in 1869. But the fair vision of scholastic progress was rudely interrupted by the death of his father in 1870, and the irruption of the Franco-Prussian War. Alt volunteered and having surmounted difficulties that arose on account of his youth was finally enrolled as a private in the Second Badish Grenadiers. At the end of his service (having passed through eleven battles) the returned sergeant again entered the university in 1871 to complete his medical course. A brief period in Strassburg followed; graduation in medicine (cum laude Heidelberg) was attained in March, 1875. Five and a half months as surgeon with the Forty-Seventh Infantry completed his required military quota and September of 1875 recorded his departure from Germany to America.

A long time friendship between Dr. Herman Knapp of New York City and his father, Dettmar, seems to have exerted the major determinant pressure; for as may be readily conceived the permanent removal from his native soil by a highly trained young medical man of the middle 'seventies was a somewhat radical venture. But the venture proved fortuitous, for he was promptly engaged as assistant to Dr. Knapp, served for nearly two years as house surgeon in the New York Ophthalmic and Oral Institute, and was granted a lectureship on the histology of the eye and ear. Thus, two years in New York, then late 1877 found Alt in Toronto, Ontario, with a membership in the College of Physicians and Surgeons of Ontario. A lectureship on ophthalmology in Trinity Medical College followed, while 1879 recorded the simultaneous publication in America and Germany of his monograph, “The Normal and Pathological Histology of the Human Eye.”

A sense of confidence in his amplifying powers is evidenced by his marriage, in 1879, to Helena Bogardus Houghtaling, daughter of Dr. D. Houghtaling of Albion, N. Y. This union with a family of original Holland strain but of undoubted American adoption (whose forebear, Col. F. Visscher, commanded the Mohawk Valley Militia at the battle of Oriskany in 1777) may be assumed to mark the pivotal point at which Alt severed his erstwhile allegiance to Germany and became in heart and life an American.

A family tradition explains his removal to St. Louis in 1880 as an effort to find “a warm climate where roses would abundantly bloom”—the which tradition also records that the succeeding winter was one characterized by unusual rigor.

His long service as editor of the *American Journal of Ophthalmology* began in 1884. Nor did he relinquish this yeoman task until 1918. Rarely does it fall to the lot of man thus to wield for such an extended period so widespread an influence at once vitalizing and fructifying.

From 1886 to 1901 he served as Professor of Ophthalmology and Otology of Beaumont Hospital Medical College. When this school coordinated with the Marion Sims Medical College under the caption Marion Sims-Beaumont



*Adolf Alt.*

School of Medicine, in 1901, to Alt fell the Chair of Ophthalmology which he held for two years. When the combined schools were taken over as the revived Medical School of St. Louis University in 1903 he continued as Professor of Ophthalmology, holding the chair until 1910. In 1910 he was appointed Professor of Ophthalmology in the Medical School of Washington University and was made Professor Emeritus of Ophthalmology in 1917.

Widely recognized as a master craftsman in his chosen field it seems superfluous to record the high regard in which he himself and his ophthalmic skill were held; held alike by

friendly colleague, combatant rival, and an ever grateful and appreciative clientele. His substantial achievements were based on an intimate knowledge of normal and abnormal structures. The microscope was his most valued ally, while the camera became a genie of the lamp to record the laboratory research of this pioneer ophthalmic scientist, in a fashion alike informative and stimulative.

The temptation to assume that his long continued editorial status served as a lash to a perennial productivity needs but to be phrased to assure its insubstantiality; rather is it to be recognized that out of a storehouse of abundant ophthalmic wealth did he spontaneously and lavishly pour his garnered treasure.

His highly trained and disciplined mind inevitably tended to evolve a style terse in form, and well nigh epigrammatic in pungency. Not for him the devious elaboration of volumes and systems; for envisaged 'gainst the mid-Victorian loquacity of our modern medical purveyors the severely condensed notations of Alt (and men of Alt's kidney) are seen to be strikingly divested of adventitious garnishment and colloquative verbiage.

It is characteristic of the simplicity and directness of his mind that he ruthlessly abandoned his quaintly compounded old world name, and that he won his spurs as Adolf Alt.

If it be true, as held by some, that he was difficult of access, not comradely (as viewed by modern standards), a bit autocratic if not frankly austere—the explanation is surely to be found in an individuality disciplined to obvious self-control, whose concept of life and life's duties was seriously elaborated and rigorously fulfilled. That all men did not so regard him will be gladly evidenced by those who enjoyed the rare fellowship of intimacy; by the recipients of his engaging hospitality; by the colleagues who shared his scientific labors; and last, but by no means least, by the members of his family circle.

For Alt the ordinary and customary amusements of the throng held no appeal. Himself a violinist of pleasing technic and discriminating taste it was a weekly occasion that a quartet (at times a quintet, violins, viola, 'cello, piano) should foregather at his hearth-tree for contented browsings through the works of master musicians. For over a quarter century were these meetings uninterruptedly held; to be followed, as a matter of routine, by a late supper at which the music-loving host presided with a geniality and charm that compelled the sometime guest to consider himself fortunate indeed.



If there was one forthstanding and significant characteristic of Adolf Alt it was his intense love of home life and home environment; and thrice blessed was he in the fellowship of her whose exquisite housewifely art and engaging personality made real that priceless haven, a genuine home.

Rich was the life he led; in the wholesome enjoyment of nature, music, art, science, and friends. The World War brought keen distress to him (as to many another loyal American of German origin) but failed to cloud the clarity of his judgment, nor shake his disciplined equanimity.

It is but a fair assumption that the cosmic cataclysm wrought damage to the sturdy vitality already exhibiting evidence of oncoming impairment. His last illness began about two and one-half years ago, a myocarditis following a bit of physical exertion; an acute cardiac dilatation exhibited itself a half year later; keen regret at enforced relinquishment of his professional work was now superimposed on his flagging physical status; hydrothorax, necessitating repeated tapping, added its share to a frequent dyspnea. The past nine months found him largely confined to bed with periods of unconsciousness, the last days beneficently free from the more acute precedent sufferings; death, from uremic toxemia, occurred June 28, 1920.

Passing strange is it that the human mind has not been rendered insensate by the torrential outpouring of sorrow during these current years of agony; that the individual finds himself responding, as of yore, to the poignant absence of comrade and friend. Cosmic distress has proved a grotesquely unavailing anesthetic for personal grief. On us that live fall the stern demands of duty; and the impelling onward strides up the stony heights, hewn out by the giants that have gone before.

NORVELLE WALLACE SHARPE, M.D.

## BOOKS FOR LEISURE MOMENTS

*Reading with discrimination broadens the mind  
and strengthens the mental grasp*

EVERY now and then a book is published that has for its purpose a shock to the reader so that he will not continue in his apathetic state—happy and content with everything in this best of worlds. Such a book is "The Thunderbolt," by G. Colmore (Thomas Seltzer, New York). Here, in plain language, is written a misdeed on the part of the Germans that is not at all

convincing—at least not convincing on the part of the present reviewer. That animals are used in Germany as elsewhere for experimental purposes in the laboratory goes without saying, but that human beings are subjected in Germany for like purposes, even when the human beings have no social position, is stretching the matter to undue proportions—to such proportions that credulity is overtaxed. The heroine of "The Thunderbolt" is "syphilized" for experimental reasons, a mistake arising in the clinic to which she went as a "private" patient of the "great" Herr Professor Reisen—a mistake which resulted in the assistants thinking the well-born and refined English girl to be a German servant who, it would seem, unlike her class in other countries, has absolutely no independence, no voice in the matter as to what her rights are in case so "great" a man as Herr Professor Reisen or any other "great" German medical authority conceives the idea of studying the vagaries of syphilis or any other disease for experimental purposes. And the refined English girl had only a "twisted" ankle, was surely better dressed than a German servant, and had all the earmarks of a stranger! So much for German penetration from an English standpoint. That German professors run amuck every now and then when baited with a new theory is ancient history, but that the incidents told in the last hundred pages of this interesting book are the truth would be taking truth and housing it forever in the stuffy hothouse of inflated imagination, there to assume a Gorgon aspect forever to frighten the wary and the unwary.

If the last hundred pages of "The Thunderbolt" are unconvincing, the same cannot be said of the first 243 pages, for here the author writes convincingly of things he knows very well. The many pictures of life in an English provincial town are delightfully drawn and the characterizations are worthy of the author of "Cranford"—that classic in English literature. All the bickerings and small prejudices of the people are brought out with a skill that stamps the author as a writer of parts which invite only admiration; and even though at times the reader may say, of what interest to the world are detailed accounts of humdrum affairs, he should be less hasty in his judgment, since all life, whether spent in small or large towns, is fundamentally humdrum. As a thunderbolt this book lacks the "bolt" even though the "thunder" growls and growls; but as an exposition of the "littleness" of life it ranks high and is well worth reading.

P. S.

THERE are at present three brilliant essayists in England whose books are well worth reading: Lytton Strachey, who wrote "Eminent Victorians"; E. T. Raymond, who wrote "Uncensored Celebrities" and "All and Sundry," and Gerald Cumberland, who wrote "Set Down in Malice." These three men belong to the new order of things—the things that are modern and are clearly indicative of post-war times. Candor is expressed in their books—the candor that was thought bad form in England and also in America before the Great War taught us that the leash which held brilliant intellects in bondage was a leash that dwarfed men's minds by unremitting whisperings that candor not divorced from the truth was the sort of candor that would not be tolerated in decent society. But today the new order reigns, and although we say "new order" it is not so new as the superficial reader may think, for the new order harks back to those brilliant days when Fielding and Smollett wrote and later on when Macauley used his ironic and brilliant pen to flay men for their misdeeds and for their pompous struttings before the footlights of life's stage. "All and Sundry," by E. T. Raymond, just off the press (Henry Holt and Company, New York), bears out what we have just said, for all its pages are illustrative of the virility and audacity and brilliance of what we would want the present period to be. Here are no rancor, no petty prejudice, no meanesses, and no attempt of the author to "shine" by comparison with the men he "treats." And best of all no Bolshevik theories and no attempt at smartness, which now takes the form of epigram and then the form of superciliousness. Just virility is here, the virility that was a lost art in England for many years and that was thought of so low a character in writing that it was shunned by all those emasculated and much-honored writers who unfortunately guided English and American thought prior to the Great War. But now we see what a great upheaval can do for the world—it can bring about a new point of view, or rather revive an old point of view in new habilaments. It surely has done this in England, and every American should be grateful for the change, so grateful that at once he should buy the books of the authors mentioned and study them with one object in view—the casting off of his affectations of speech and the revivification of candor, Anglo-Saxon virility, and an untrammelled judgment of men and things untinted by personal dislike and personal hatreds. P. S.

## NEWS NOTES

THE American Child Hygiene Association will hold its next annual meeting in St. Louis, October 11, 12, 13. Dr. Borden Veeder of St. Louis is chairman of the committee on arrangements.

THE Central States Pediatric Society will hold its next meeting at St. Louis, October 13 and 14. A joint session will be arranged with the American Child Hygiene Association during the meeting.

DR. EVARTS A. GRAHAM, professor of surgery in Washington University Medical School, St. Louis, is one of five American surgeons designated to read papers at the International Congress of Surgery held in Paris, July 19-23. The subject of his treatise was "Surgical Aspects of Asphyxia."

DR. T. A. COFFELT of Springfield was elected president of the Mid-West Academy of Ophthalmology and Oto-Laryngology at the annual meeting of that society held in Wichita in June. Dr. Harold Bailey of Springfield was elected secretary-treasurer. The 1921 meeting will be held in Springfield.

THE Butler-Stoddard County Medical Society and the Chamber of Commerce at Poplar Bluff held a joint meeting on June 19 to arrange plans for advocating a bond issue of \$100,000 for a county hospital. The proposition will be voted on at the November election and in the meantime all efforts will be put forth to popularize the movement.

THE University of Maryland created a separate department of anesthesia several years ago and put Dr. S. Griffith Davis in charge with the title of associate professor. Having realized the importance of the work the university has made Dr. Davis professor in this department. So far as records are available, this is the first professorship of anesthesia to be created in the United States.

THE Medical Association of the Southwest will hold its fifteenth annual session at Wichita, Kan., September 27, 28, 29. The session on September 27 will be given over entirely to a reunion of the medical officers who were called into active service during the World War and



will be a purely social gathering with a banquet in the evening. Dr. E. F. Day of Arkansas City, Kan., is president of the association, and Dr. F. H. Clark of El Reno, Okla., is secretary.

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DR. WILLIAM L. GIST of Kansas City has been appointed superintendent of the General Hospital of that city to succeed Dr. A. W. Thompson, resigned. Dr. Gist was the choice of the Jackson County Medical Society and was recommended to the mayor by that body. During the war he was director of ambulances of the Thirty-Fifth Division with the rank of major. His abilities as an administrator developed in that position largely influenced his appointment.

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DR. WILLIAM R. SUMMERS of Springfield has purchased from the Springfield Hospital Association, the Ozark Sanatorium, and will continue to operate the institution as his own hospital for the care and treatment of nervous and mental cases. The sanatorium formerly was the property of the late Dr. Samuel A. Johnson. After Dr. Johnson's death, Dr. Summers managed the institution until he joined the Medical Corps of the Army, when it was taken over by the Springfield Hospital. The hospital has a capacity of twenty-five patients and is composed of two buildings well adapted for the purpose of treating these cases.

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A NEW medical journal, *Annals of Medicine*, is to be published quarterly under the direction of the councilors of the American Congress on Internal Medicine, and the American College of Physicians as the official organ of these bodies. The first number has just appeared, although dated April, 1920, and is edited by Dr. Frank Smithies. A somewhat voluminous abstract of literature on internal medicine, nine original articles and a roster of the members of both the college and the congress fill the 160 pages in this initial number. Among the large number of associate editors we note Drs. W. W. Duke, George H. Hoxie, L. S. Milne of Kansas City, and William Engelbach of St. Louis.

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To encourage study of the means for the prevention and cure of tuberculosis, the Hennepin County Tuberculosis Association of Minneapolis announces that it has set aside a fund for the support of a tuberculosis research fellowship in the Graduate School of the University of Minnesota. The candidate for the fellowship must be a graduate of a Class A medi-

cal college. He will be expected to devote himself to research in some problem concerned with the causes, prevention, or cure of tuberculosis. No teaching or other service will be required. The fellowship yields \$750 the first year and progressively increasing amounts to be appropriated for the second and third years as conditions warrant. Inquiries and requests for application blanks should be addressed to the Dean of the Graduate College, University of Minnesota, Minneapolis, Minn.

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THE annual assembly of the Tri-State District Medical Society of Iowa, Illinois and Wisconsin will be held at Waterloo, Iowa, October 4, 5, 6 and 7. The physicians of Missouri who are in good standing in their state society are most cordially invited to attend the meeting and participate in the program. Entertainment will be furnished for the ladies. A large number of essays and discussions will be furnished by the physicians of the Middle West. Among the physicians who have been invited and who have accepted places on the program are: Drs. George W. Crile, Harvey Cushing, Robert T. Morris, Robert B. Osgood, Lewellys F. Barker, Alfred Stengel, William Engelbach, John F. Binnie, Hubert Work, Commander William S. Bainbridge, U. S. Navy; Surgeon-General Hugh S. Cumming, U. S. Public Health Service; Daniel R. Carman, and Gen. John J. Pershing.

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AT its meeting, held June 18, at Atlanta, the National Eclectic Medical Association adopted the following resolution:

WHEREAS, The Regular State Medical Board of Arkansas has recently sent a resolution to every examining board in the United States, calling attention to the fact that the Arkansas Eclectic Medical Board of Examiners persists in examining and licensing graduates of a nondescript medical college of Kansas City, Mo., primarily it may be to embarrass that college, but secondarily it may be an attempt to reflect on eclectics in general, and this national body in particular.

Resolved, That the secretary of this Arkansas regular board be notified that the aforesaid institution is not recognized as an eclectic college by this body.

This college is reported as not recognized in Missouri, its home state, nor is it probable that it would be recognized by the regular medical boards in the adjoining states. It has been reported that the college called itself "eclectic" in order that its graduates might appear before the Arkansas Eclectic Board of Medical Examiners and by that makeshift secure licenses.—*Jour. A. M. A.*, July 10, 1920.

THE Sixth International Sanitary Conference of the American Republics will be held at Montevideo, Uruguay, December 12-20, under the presidency of Dr. E. Fernandez Espiro and the auspices of the government of Uruguay. A number of important sanitary questions will be discussed and it is expected that all the nations in the Pan-American Union will be represented. Dr. Hugh S. Cumming, Surgeon-General of the U. S. Public Health Service and provisional chairman of the International Sanitary Bureau, has issued the call for the conference which has been transmitted to the governments by Hon. John Barrett, Director General of the Pan-American Union. The Pan-American Union is the international organization maintained by the twenty-one American Republics for the development of good understanding, friendly intercourse, commerce and peace among them. It is controlled by a governing board composed of the Secretary of State of the United States and the diplomatic representatives in Washington of the other republics, and administered by a director general and assistant director chosen by the governing board.

DEPARTING from its policy of designating government hospitals by number and camp location the War Department has begun naming general hospitals in memory of deceased medical officers whose careers were marked by some distinguished service. In the list published in *The Journal of the American Medical Association* recently, one hospital is named in honor of Lieut. William T. Fitzsimmons, formerly of Kansas City, Mo.; and another hospital is named in honor of Major William Beaumont, who pursued much of his investigative work on digestion while residing in St. Louis. The announcements taken from *The Journal of the American Medical Association* follow: "General Hospital No. 21, at Denver, is announced and will be known as the 'Fitzsimmons General Hospital, Denver,' in honor of First Lieut. William Thomas Fitzsimmons, Medical Officers' Reserve Corps, U. S. Army (born 1889, died 1917), a skilled surgeon and the first officer of the U. S. Army killed in the World War. He met his death at Dannes Camiers, France, Sept. 4, 1917, in an air raid by the enemy while serving with Base Hospital No. 5, U. S. Army. The name also fittingly commemorates the eminent services rendered by the civil medical profession of America as members of the Medical Corps of the Army during the World War. The new hospital to be constructed on the military reservation at El Paso, Texas, for which

funds have already been appropriated, is announced and will be known as the 'William Beaumont Hospital, El Paso, Texas,' in honor of Major William Beaumont, Surgeon, U. S. Army (born 1785, died 1853), who during his service as a medical officer of the Army conducted epoch-making investigations of the physiology of digestion, and as a result of his researches became the leading physiologist of the country and the first to make an important and enduring contribution to that science."

THE following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Abbott Laboratories: Benzyl Benzoate (Abbott); Elixir Benzyl Benzoate (Abbott); Tablets Benzyl Benzoate (Abbott).

Arlington Chemical Company: Pollen Extracts-Arlco: Aster, Birch, Cherry, Clover, Corn, Dahlia, Daisy, Dandelion, Dock, Elm, Goldenglow, Goldenrod, Hickory, June Grass, Locust, Maple, Narcissus, Oak, Orchard Grass, Poplar, Poppy, Red Top, Rose, Rye, Sunflower, Timothy, Walnut, Willow, Ragweed (*Ambrosia trifida*), Ragweed (*Ambrosia artemisiifolia*).

Abbott Laboratories: Anesthesin - Abbott; Aromatic Chlorazene Powder; Tablets Dichloramine-T-Abbott.

Diaprotein Company: Diaprotein Prepared Casein Flour.

Gilliland Laboratories: Streptococcus Vaccine (Gilliland).

Heyden Chemical Works: Acetylsalicylic Acid-Heyden.

Hollister-Wilson Laboratories: Capsules Corpora Lutea Desiccated-Hollister-Wilson; Tablets Corpus Luteum Desiccated-Hollister-Wilson; Pituitol Obstetrical; Pituitol Surgical.

Lederle Antitoxin Laboratories: Pollen Antigen-Lederle (Spring Type).

Lowy Laboratory, Inc.: Solution Arsphenamine-Lowy.

Radio Chemical Corporation: Radium Bromide (Radio Chemical Corp.); Radium Carbonate (Radio Chemical Corp.); Radium Chloride (Radio Chemical Corp.); Radium Sulfate (Radio Chemical Corp.).

E. R. Squibb and Sons: Bacillus Bulgaricus-Squibb.

Fritzsche Brothers, Inc.: Benzyl Benzoate (Fritzsche).

Gilliland Laboratories: Pertussis Bacillus Vaccine; Diphtheria Toxin-Antitoxin Mixture.

Heyden Chemical Works: Ichthyol.

Hynson, Westcott and Dunning: Whole Ovary-H. W. D.; Whole Ovary Tablets-H. W. D., 5 grains.



Lederle Antitoxin Laboratories: Antipneumococcus Serum (Polyvalent); Gonococcus Glycerol Vaccine; Pollen Antigen-Lederle (Fall Type).

Dietetic Cellulose Co.: CellufLOUR.

Intra Products Co.: Ven-Iron Cacodylate; Ven-Iron Cacodylate with Sodium Chloride.

## MEMBERSHIP CHANGES, JULY

### NEW MEMBERS

Burch, George W., 1722 E. Eighth St., Kansas City.

Dixon, James F., Rives.

Faris, John C., Cunningham Bldg., Caruthersville.

Hartwell, Basil O., Amsterdam.

Minor, James C., 511 Commerce Bldg., Kansas City.

Scovern, Harold B., Carrollton.

Singleton, J. Milton, 610 Lathrop Bldg., Kansas City.

### CHANGES OF ADDRESS

Bradford, O. F., Fayetteville, Ark., to 215 Wirthman Bldg., Kansas City.

Clay, Homer T., St. Louis, to Children's Memorial Hosp., 735 Fullerton Ave., Chicago, Ill.

Davis, A. L., Memphis, to Arbela.

Denton, Levi D., Braggadocio, to Caruthersville.

Divine, Duke G., Appleton City, to 3034 Euclid Ave., Kansas City.

Haas, Ferdinand F., Philadelphia, Pa., to 108 E. Cornington St., Peoria, Ill.

Hahn, Charles N., Dunnegan, to Humansville.

Hammersley, G. O., Campbell, to Caruthersville.

Lester, Franklin W., St. Louis, to 487 N. Fourth St., Coltan, Calif.

Ogle, Oliver L., 2625 St. Louis Ave., St. Louis, to 3126 N. Grand Ave.

Painter, Albin M., 310 Sharp Bldg., Kansas City, to 1208 Wyandotte.

Royer, Don J., 409 W. Main St., Fort Wayne, Ind., to 219 W. Wayne.

Stone, Edna M., 3833 Washington Ave., St. Louis, to University Club Bldg.

Trisler, J. W., Morley, to Oran.

White, Melvin S., New Cambria, to 414 E. Excelsior, Excelsior Springs.

Wilkes, Benjamin A., Hollywood, Calif., to Box 107, Hollywood St., Los Angeles.

### DECEASED

Alt, Adolf, 5614 Waterman Ave., St. Louis.

## OBITUARY

### ROBERT F. WICHTERICH, M.D.

Dr. Wichterich of Cape Girardeau, a graduate of the Barnes Medical College, 1899, died suddenly in his office, April 2, 1920, aged 51 years, of angina pectoris. He died in the harness, so to speak, serving afflicted humanity up to the very hour of his going. Although afflicted himself for several years past with an incurable malady, he never faltered in his service to the people nor relaxed his devotion to his chosen profession. He was a regular attendant at the meetings of the Cape Girardeau County Medical Society and always manifested great interest in its welfare and prosperity. He served as its president and presented numerous papers of great merit. He was a native of Cape Girardeau County and lived here all his life. He lived a life of probity and usefulness and his loss will be distinctly felt by the community in which he spent his rather short existence. He was a man endowed with many commendable qualities, a man of positive ideas, true to his convictions, true to his friends, and charitable to the poor. He was a consistent member of the church, having unswerving faith in the hope and promises of the Christian religion.

He lived a most honorable life in every respect and one of the greatest compliments we, as doctors, can pay to his memory is to recite the fact that he was always honorable and ethical in his intercourse with members of our profession. There is no stain of petty quackery on his escutcheon. He was a close student of the "divine art" of healing, reading after the best authors in medicine and surgery and keeping himself fully abreast of the profession, his broad mind unshackled by cult or pathy. He had his share of troubles in this life and be it said to his credit that he bore them with resignation and without complaint. When the summons came he recognized the icy finger of death, and so expressed himself to his colleague, meeting his fate bravely and dying the death of a noble man, not "like the quarry slave scourged to his dungeon, but rather like one who foldeth down the draperies of his couch about him and lieth down to pleasant dreams." May he rest in peace.

WHEREAS, Divine Providence has removed from our ranks our esteemed brother and co-worker, Robert E. Wichterich; therefore be it

*Resolved*, That in the death of Dr. Wichterich the Cape Girardeau County Medical Society has sustained the loss of a friend whose fellowship it was an honor and a pleasure to enjoy; that in testimony of his many virtues and stainless life a page in our record be dedicated to his memory and properly engrossed and this memorial inscribed thereon; that we offer to his bereaved family and mourning friends, over whom sorrow has hung her sable mantle, our heartfelt condolence.

GEORGE W. VINYARD, M.D.,  
W. K. STATLER, M.D.,

Committee.

## MISCELLANY

### DISTRIBUTORS AND PRODUCERS OF CERTIFIED MILK

The St. Louis Pure Milk Commission takes pleasure in announcing the names of the producers of certified milk for the St. Louis market, the location of the dairies, the names of the distributors, and the approximate daily output of each producer.

#### Name and Location of Certified Farms

NAME	LOCATION	PROPRIETOR
Blue Ribbon Farm, Ballwin, Mo.	.....	A. W. Schissler
Wilco Farms, Willisville, Ill.	.....	Krause Bros.
Meramec Valley Farm, Pacific, Mo.	.....	Wm. Beauchamp
Stupp Farm, Pevely, Mo.	.....	Julius Stupp
Shields Dairy, Eureka, Mo.	.....	Thomas Shields

#### Approximate Production Bottled

NAME	PRODUCTION GALLONS	DISTRIBUTOR
Shields Dairy	175	St. Louis Dairy Co.
Wilco Farms	140	City Dairies Co.
Blue Ribbon Dairy	70	Jersey Farm Dairy.
Meramec Valley	40	Pevely Dairy Co.
Stupp Farm	125	Pevely Dairy Co.

Further information concerning the certified milk situation in St. Louis may be obtained from the secretary of the commission, Mr. H. E. Mortland, at the laboratory of the commission, 1726 North Thirteenth Street, St. Louis.

### ST. LOUIS PHYSICIANS GOLF CLUB

#### Players' Tournament, June 11, 1920, Glen Echo

Name	THE SCORE				
	Out	In	Total	Handicap	Net
Sherck	59	60	119	25	94
Dean	55	57	112	25	87
Kelly	54	51	105	25	80
Higbee	50	48	98	10	88
Soper	50	41	91	10	81
Schwab	54	47	101	12	89
Moore	57	52	109	20	89
Tupper	59	52	111	25	86
Graves, Spencer	57	58	115	25	90
Pitzman	50	54	104	20	84
Clapper	46	47	93	12	81
Montague	56	67	123	30	93
Yost	49	55	104	20	84
Parman	56	52	108	25	83
Dorsett	68	63	131	30	101
Wiatt	60	60	120	30	90
Lewis	49	49	98	10	88
Schreiber	56	51	107	20	87
Kistner	53	50	103	20	83
Smith, J. M.	54	55	109	20	89
Woodruff	..	..	125	25	89
Harris, D. L.	50	56	106	20	86
Thompson, R. L.	62	60	122	30	92
Elmer	56	53	109	30	79
Wilhelmi	48	50	98	15	83
Fry	70	65	135	30	105
May, B. F.	..	..	111	30	82
Fleisher	..	..	102	20	82
Post, M. H.	52	55	107	20	87
Bailey	43	40	83	6	77
Charles	52	51	103	25	78
McKay	48	46	94	11	83
Arbuckle	..	..	139	30	99
Ravold	49	46	95	15	80
Vogt, W. H.	65	64	129	30	99
Paine	41	42	83	0	83
Fischel, Walter	52	55	107	20	87
Post, L.	48	46	94	10	84
Burns, S. S.	51	51	102	20	82
Woolsey	58	63	121	25	86
Heuer, S.	53	60	113	25	86
Levy, A.	54	54	108	20	88
Marchildon	82	..	..	..	..

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1920

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Webster County Medical Society, Dec. 1, 1919.  
 Madison County Medical Society, Dec. 2, 1919.  
 Livingston County Medical Society, Dec. 31, 1919.  
 Schuyler County Medical Society, Jan. 9, 1920.  
 Benton County Medical Society, Jan. 23, 1920.  
 Camden County Medical Society, Jan. 28, 1920.  
 Linn County Medical Society, Feb. 24, 1920.  
 Ralls County Medical Society, March 8, 1920.  
 Ste. Genevieve County Medical Society, March 17, 1920.  
 Atchison County Medical Society, March 26, 1920.  
 Chariton County Medical Society, April 6, 1920.  
 Cass County Medical Society, April 7, 1920.  
 Clinton County Medical Society, June 15, 1920.

### TWELFTH ANNUAL MEETING OF MISSOURI SOCIETY OF MEDICAL SECRETARIES

Jefferson City, April 7, 1920

The twelfth annual meeting of the Missouri Society of Medical Secretaries was called to order in the Senate Lounging Room of the State House, Jefferson City, April 7, 1920, at 4 p. m., by the president, Dr. J. T. Hornback of Nevada.

The secretary called the roll and the secretaries from the following counties responded: Adair, Atchison, Audrain, Bates, Buchanan, Callaway, Carroll, Chariton, Christian, Clay, Cole, Daviess, Grundy, Jackson, Laclede, Miller, Newton, Phelps, Platte, Pulaski, Putnam, Randolph, Saline, Vernon.

The minutes of last year's meeting at Excelsior Springs were read and approved. The election of officers followed and the following were elected to serve until our next meeting: President, Dr. J. D. Brummall, Salisbury; first vice president, Dr. Fred Griffin, Mexico; second vice president, Dr. W. S. Smith, Rolla; secretary-treasurer, E. E. Brunner, Carrollton, reelected.

Dr. J. J. Gaines, Excelsior Springs, gave a very interesting as well as entertaining talk on "Our District Postgraduate Meeting." He brought out very forcibly (and, as usual, sometimes humorously) many things that we who have not had such meetings have missed.

It would be impossible to reproduce his talk here, but suffice it to say we all enjoyed hearing it. He was the only member on the program who responded.

Motion made and carried that in case of death of a member, the county secretary should notify the state secretary, and send proper obituary report for publication in the STATE JOURNAL.

The usual report of the councilors to the secretaries followed.

Dr. A. H. Hamel, St. Louis: I feel that the question of the postgraduate meetings is so very important to the practitioner that more should be said about it. The House of Delegates and the Council are in favor of continuing the meetings. In fact, it is part of our by-laws. I do not believe that those of us who have not seen the scope and possibilities of this work can begin to appreciate the immense benefit it is creating. It differs from any other system of postgraduate work that has been inaugurated because it is a practical subject and deals in a practical way with every phase of medicine and surgery and appeals to practical men. The American Medical Association in former years put out a series of postgraduate studies that, as you



all know, has fallen into disuse. I can say, voicing the sentiment Dr. Goodwin has expressed, that Dr. Simmons of the American Medical Association has watched this movement in Missouri with very keen appreciation. I think that our system is going to meet the requirements because it does away with the necessity of you and I looking through manuscripts, going back reading and studying lectures and courses, and brings us qualified men to give us the ideas and the practical application of those ideas that are modern, scientific, and up to the minute. The duty of the secretaries' society, as I see it, is to have the county society and the district councilor select the subjects the time and the place to meet and notify the state secretary. He consults with the executive committee who selects the men doing special work to respond to the invitation to address the postgraduate meeting. Not once have men refused to respond to the call. I attended such a meeting at Cape Girardeau and never have I seen such an enthusiastic bunch of men. I have never seen men go away from a meeting so thoroughly satisfied that they had gotten something useful, and I believe from all reports that that is the sentiment expressed from each and every one of these meetings.

Dr. Franklin E. Murphy, Kansas City: The beautiful part of the postgraduate meetings is the fact that we get something that we can take home; something that is useful. I am very glad to have the honor to appear here and discuss with you this question of postgraduate work. I believe it is going to revive more interest in our organization.

Dr. Timberman, Marston: I do not see any secretaries from Southeast Missouri, but I can second Dr. Hamel's reference to the splendid meeting at Cape Girardeau and I feel free to say that from the country practitioner's viewpoint that meeting was undoubtedly the most successful meeting of the Southeast Missouri Medical Association. The professional men who delivered those lectures gave us a new knowledge. Not a man who attended that meeting but went away having gained something. That program at Cape Girardeau consisted of morning, afternoon and evening sessions given over to the settlement of various problems by men who were capable and finished men in their special lines. Of particular interest to me were the splendid clinics on the chest, and a skin clinic. Later Dr. Caulk delivered us a lecture on genito-urinary work. He was a young man from St. Louis, who, when he finished his two hours' talk, we knew we had been listening to a master.

Dr. J. D. Brummall, Salisbury: I think, if I remember correctly, the secretaries have heartily endorsed this movement and stated that they would cooperate. Is it the councilor's business to see that the meetings are held or should the county society take it up and recommend to the councilor of the district that the meetings be held in that district? They are a great advantage and will be a great help.

Dr. Hamel: The proposition of course is under the jurisdiction of a council, but there is nothing compulsory about it. The desirability of having or not having a postgraduate meeting in any county or any particular district rests primarily with the societies in the district. But when the county societies request it the councilor shall then call a conference of the presidents and secretaries of his district and if approved they arrange the program. To have a postgraduate meeting there must be a request come from the county society directly to the secretary of the state association or to the Council with an outline of the program wanted, subjects to be dealt with, etc. The Council will furnish speakers for the occasion.

Dr. McComb, Lebanon, wanted to know who pays the expense of the meeting.

Dr. Hamel: Expenses have all been borne by the gentlemen who give the lectures. There has been no expense on the secretaries or members. Now in

looking over the Washington University, St. Louis University, and the University of Missouri only one suggestion was made about paying expenses. That was that many of the laboratory workers, men who are not in practice of medicine, might be compensated for at least part of their expense. The executive committee has not called on any of those gentlemen and so far as we know there has not been one dollar demanded of any county to pay the gentlemen attending these postgraduate meetings.

Dr. Murphy: It is advantageous for the men in the country to determine just what subjects they wish discussed, but to write and ask the men direct to supply the program does not always work out to the best advantage of the meeting. Every once in a while in one of the larger places where some research work is done and some special investigations are being made, the men in that locality know about it; men in the country do not know about it so I think you do better by leaving it to the Council to supply the men.

Dr. Bruton: How do we reach these men? Through whom?

Dr. Murphy: Dr. Gaines will tell you that.

Dr. Gaines: All we did was to respond to the request of our councilor for a meeting of the presidents and secretaries in our district. We met and formulated a program we wanted discussed. Then we mailed that to Dr. Goodwin at St. Louis and he attended to the rest.

Dr. Hamel: If you will recall in the House of Delegates on the first day we had no report from our committee on cancer; no report of the committee on prevention of blindness, vaccination, medical expert testimony, revision of constitution and by-laws; committee on necrology. Feeling that you are the bone and sinew of the Association, I bring to your attention certain negligences of which we have been very guilty. We can and have no right to overlook a report on the prevention of blindness. The committee should have had a report. This is not putting blame on you gentlemen in any way. But the most discussed question that was brought up, and the councilors themselves accuse themselves for certain negligences, is this: that men who have been members of the organized profession for years; men who have been faithful in their duties; men who have been officers for years, and men who have held responsible offices in the board of health and other bodies—those men live and we intermingled with them. They die, and not even a proper memorial is recorded in our STATE JOURNAL. Dr. J. A. B. Adcock, a member of this Association for a number of years, lived and mingled with us; he died, and never a word was sent to the headquarters of our Association relative to his death, by his component society. Our efficient secretary and editor, Goodwin, wrote and solicited and tried to get something. I made inquiries and said something must be presented to the profession. Dr. Goodwin finally wrote a biographic sketch describing the special features of this life from such data as he had and I could give him, and it was printed. It was the best that could be done by anyone away from the home of Dr. Adcock. There is no reason under the sun why all complete data should not be published in the STATE JOURNAL promptly following the death of members. If you will read Section 13, Chapter 12, of the by-laws, you will read: "The secretary of each county society shall keep a roster of its members, and a list of the nonaffiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this state, and such other information as may be deemed necessary, etc." Possibly, if this matter were brought to the attention of the county secretaries, it might be possible for Dr. Goodwin to obtain a very complete record of departed members. I believe that with councilors of the district

acting with the secretaries of the county societies we should be able to send in a very complete record of deaths so that if there be no biography there could be at least a memorandum of the men who have passed away and the time of their passing away.

Dr. McComb: It is not clear to me what the secretaries are supposed to do, whether to write an obituary or just report the death. Personally, I would be very glad to assume that duty.

Dr. Brummall: If the state secretary had a form printed to set forth what was wanted furnished to the secretaries of the county societies they could send that in and whatever else they want to.

Dr. Maguire: I would like to make a motion that we instruct the secretary of each county society to put in the hands of the councilor of their district a complete roster of the deaths and such other information regarding the writing of obituaries on members who have passed away and this be handed to the councilor of each district from the several counties and also sent to the state secretary.

No action was taken on this motion and after a little further discussion the society adjourned to the Madison House, where the annual banquet provided by the State Association was held.

Dr. Wood presided at the banquet table where forty-four members gathered, and after an excellent dinner, gave the secretaries one of his characteristic encouraging addresses and in taking his farewell as the presiding officer of the Association, thanked the members for their diligent attention to their duties during the year. He called on Dr. Gaines for a talk, which the genial gentleman from Clay County was prepared for, and in his most happy vein described some of the trials and tribulations inflicted on the doctor and his long-suffering wife by that necessary apparatus, though oftentimes an instrument of torture, the telephone.

After the banquet the members attended the entertainment provided for them at the penitentiary.

E. E. BRUNNER, M.D., Secretary.

## PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

Sixty-Ninth Meeting, May 3, 1920

### 1. PRESENTATION OF CASES.

### 2. STUDIES ON DIGITALIS DOSAGE IN CHILDREN.—By DR. HUGH McCULLOCH AND DR. WAYNE A. RUPE.

In order to establish whether or not the rules governing the administration of digitalis to adults, as lately outlined by Eggleston in particular, are applicable without change to children, we have attempted to determine the amount of standard tincture of digitalis necessary to produce effects on the hearts of children.

We have given a standard tincture of digitalis to thirty-six healthy children from 1 to 12 years of age whose hearts, from clinical and electrocardiographic standpoints, were normal. The amounts given were estimated purely on an arbitrary basis—no set rule of dosage such as Eggleston prescribes being followed.

The amount in cubic centimeters per kilo of this standard tincture of digitalis which was required to produce well recognized clinical or electrocardiographic manifestations of digitalis effect was carefully estimated.

We found that, considering the group as a whole, from two to five times as much digitalis was necessary to produce recognized digitalis effects in these normal patients as was found necessary by Eggleston to produce an optimum therapeutic effect in patients with cardiac disease. Children below the weight of 20 kilos, these for the most part being under 4 years

of age, seemed somewhat less resistant to digitalis effect than those above this weight and age.

The drug was well borne as a rule—no marked toxic effects were noted in any case.

### DISCUSSION

DR. MARRIOTT: This paper is of particular value from the therapeutic standpoint. Digitalis is too frequently used when there is no clear indication, and when there is an indication the dosage is often incorrect. If digitalis is needed at all, a sufficient amount should be given to accomplish the desired result. These studies of Dr. McCulloch and Dr. Rupe show that approximately three times as much digitalis may be given per kilo of body weight to children as has previously been advised. It is to be pointed out, however, that these patients were normal from the cardiac standpoint. It is quite possible that children suffering from cardiac disease may react differently to digitalis.

### 3. IN VITRO EXPERIMENTS CONCERNING THE ANTIKETOGENIC ACTION OF GLUCOSE.—By DR. P. A. SHAFFER.

The oxidation of each of the "acetone bodies," acetone, aceto-acetic acid and B hydroxy butyric acid and of their precursor, butyric acid, by hydrogen peroxid in the presence of glucose, and in its absence, has been studied in the hope of finding the conditions under which glucose might exert an "antiketogenic action" similar to the effect which carbohydrates have in the body of preventing or abolishing the formation of the "acetone bodies." It is found that when aceto-acetic acid and glucose in alkaline solution are simultaneously oxidized by hydrogen peroxid, the aceto-acetic acid, even at room temperature, is much more rapidly destroyed than in the absence of glucose. The details of the reactions are being further studied.

The results are interpreted as supporting the view that the "antiketogenic action" of glucose in preventing ketonuria is to be explained by a definite molecular reaction, by which glucose or its dissociation product takes an essential part in the oxidation of aceto-acetic acid; and that in the absence of a sufficient molecular proportion of glucose, aceto-acetic acid is not oxidized in the body, but as it accumulates is in large part reduced to B hydroxy butyric acid and decomposed into acetone.

### 4. STUDIES IN BONE TRANSPLANTATION: AN EXPERIMENTAL STUDY OF THE COMPARATIVE SUCCESS OF AUTOGENOUS AND HOMOGENOUS TRANSPLANTS OF BONES IN DOGS.—By DR. BARNEY BROOKS AND WILLIAM A. HUDSON.

The large amount of clinical and experimental study of the results of autogenous bone transplants have led to fairly definite conclusions in regard to the fate of such transplants. Very little, however, is known of the results of transplantation of bone from one individual to another of the same species. The rather general failure of transplantation of tissues between individuals of even the same species has led to the belief that such transplants are ultimately unsuccessful. It has been previously demonstrated by Ollier and Axhausen that homogenous transplants of bone survive and show evidence of regeneration, but these investigators have not reported experiments of long duration.

The object of the experiments reported in this paper was to determine the following points:

1. Is it possible to regenerate, permanently, a defect in the shaft of a bone by a transplant found in another individual of the same species?

2. In what proportion of instances will this successful result follow?



3. What is the influence of the ages of the donor and recipient on success or failure of the transplant?

Dogs were used for the experimental animals. The animals were operated on in pairs. A segment of the shaft of each ulna was excised. One of the bone defects in each animal was bridged by an autogenous transplant. The other defect in each animal was bridged by a homogenous transplant; the transplants being interchanged between the two animals. The animals were given alizarin red intraperitoneally. This dye has the property of staining, during life, all bone which grows during the period of the experiment. The animals were allowed to live for periods varying from two weeks to nine months. The animals were sacrificed and the autogenous and homogenous bone transplants were studied with the following results:

1. Autogenous transplants were successful in 84 per cent. of instances.

2. Homogenous transplants were successful in 74 per cent. of instances.

3. Homogenous transplants were found to result in complete regeneration of a defect in the shaft of the bone after periods of seven to nine months.

4. The age of the experimental animals has an important influence on the percentage of success of the autogenous transplants.

5. The influence of the ages of the donors and recipients of the homogenous transplants was outweighed by other influences of incompatibility of tissues between individuals of the same species.

#### DISCUSSION

DR. OPIE: The ingenious method which has been employed in these experiments is well adapted to determine the conditions under which regeneration of bone occurs. Does regeneration depend on conditions similar to those which influence the safety of blood transfusion? Is it possible that the serum of one animal is favorable and another unfavorable to the transplanted tissue?

DR. BROOKS, closing: In a considerable number of the experimental animals the red blood corpuscles and sera were tested for the presence of isohemolysins and agglutinins. None were found. No attempt was made to determine the influence of relationship of the animals on the success or failure of the homogenous transplants. All the experimental animals used were probably in no way related.

#### 5. STUDIES IN EXPERIMENTAL BONE PRODUCTION.—By GOICHI ASAMI AND WILLIAM DOCK.

A number of cases of experimental production of bone in the kidneys of rabbits and dogs as well as in the aorta of the rabbit have been reported. So far as the production of bone in the rabbits' and dogs' kidneys is concerned, all the investigations so far carried out were in connection with entirely different problems, such as the study of histogenesis of marrow cells and regeneration of renal tissues. For this reason, probably, the experimental side of the problem has not been studied with sufficient detail to establish certain facts bearing directly on the doctrine of metaplasia.

At the December meeting of this society one of us (Asami) reported a case of bone formation in the fallopian tube and discussed its probable origin in a metaplastic process. He also found cartilage in this case undergoing ossification, the fact previously described by several other authors. This has been suggested a possibility that cartilage might also have some definite rôle in heteroplastic formation of bone.

For these reasons we have decided to study by series of experiments the various factors that have been mentioned by the previous investigators and various processes that may be involved in the aberrant bone formation.

We have subjected twenty rabbits to ligation of renal vessels on one side, fourteen rabbits to autotransplantation of ear and xiphoid cartilages, and five to injection of calcium salts.

Of twenty animals whose renal vessels were ligated, three became infected; of the remaining seventeen, all the kidneys treated as above indicated contained typical bone. In four of the kidneys typical bone marrow with myelocytes, normoblasts and other elements of the marrow was also found.

Of the fourteen animals which received cartilage transplantation, seven showed positive results as regards bone formation. In this series only ear cartilage was productive of positive results. Xiphoid cartilage showed neither much proliferation nor bone formation.

In the kidney the previous workers have described two distinct methods of transformation of connective tissue into bone: a direct conversion of scar tissue into bone, and a deposition of bone by connective tissue cells that come in contact with calcium salts which are being eroded by granulation tissue.

In our series of kidneys, we were able to trace the proliferation and migration of fibroblasts from the upper part of the ureter, and the formation of bone by these fibroblasts as they enter the calyces of the necrotic and calcified kidney. We also found that there are probably three different modes of transformation of connective tissue into bone. The first and most frequent type is that in which young connective tissue cells congregating in the calyces become bone cells; the second form occurs in connection with the calcific deposits out in the medulla of the kidney; the third form is that of a direct transformation of hyaline connective tissue into bone. Thus, it will be seen, that although by the study of pathologic human specimens it has been maintained that a direct conversion of scar tissue into bone is frequent, such a form of bone formation appears unlikely as a primary process.

#### DISCUSSION

DR. OPIE: These experiments may bring up a number of points of importance in relation to bone formation. The formation of bone after ligation of the artery of the kidney is a truly spectacular phenomenon. There is accumulation of calcium; bone formation occurs in connective tissue and within the bone there is formation of marrow in some instances containing the characteristic giant cells of the bone marrow. It is hard to find any other explanation than metaplasia.

In view of the relation of calcium in the necrotic tissue to bone formation in these experiments and the frequent occurrence of bone formation in proximity to calcium deposits in human pathology, it is difficult to escape the conclusion that the presence of calcium is a stimulus for this metaplasia.

The experiments with cartilage are of unusual interest. After cartilage of an ear of a rabbit has been placed in the subcutaneous tissue a process identical with endochondral bone formation occurs. Cartilage cells undergo proliferation similar to that which precedes the deposition of bone in contact with epiphyseal cartilage.

One of the experiments suggests that boiled cartilage is capable of bringing about the same series of phenomena. I have no doubt that subsequent experiments will be carried out by Mr. Asami and Mr. Dock to determine this point.

DR. BARNEY BROOKS: The results of these experiments of Messrs. Asami and Dock are extremely interesting. It would seem that they are contrary to a large amount of other experimental work. For instance, it has been shown that living bone transplanted into soft tissue always undergoes atrophy and absorption. Also numerous experiments in which

various sorts of calcium-containing material have been placed in defects in bone, have not produced any demonstrable evidence that these calcium salts cause new bone formation. In these experiments it would seem, therefore, that typical bone formation was produced in a site in which bone is not normally found. The explanation of this fact is certainly not clear.

#### Seventieth Meeting, May 17, 1920

### I. PRESENTATION OF CASES. A. A CASE OF OXYCEPHALIA.—By DR. G. W. BELCHER.

S. M., admitted May 12, 1920; discharged May 21, 1920; aged 5; white; Italian. Diagnosis: Congenital malformation of skull. Neuritis, optic, right and left. Choked disc.

History: C. C. headache. Bulging of eyes.

Family history: Negative.

Past history: Full term, short labor, weight 6 pounds. Breast fed until 4 months, then fed on whole milk. In City Hospital at 17 months with pneumonia and laryngitis. Child's head normal at that time.

Present illness: Just a week ago, patient began to complain of headache and put hand over forehead. No vision defect, pain in eyes, dizziness or blindness. Exophthalmus noticed three days ago.

Physical examination: Child bright for age. Skull definitely oxycephalic. Marked thickening in region of anterior fontanelle. Marked exophthalmus. Moderate choked discs. Widening of temporal fossae. Roentgen ray: Extreme convolutional atrophy of a degree never seen in brain tumors. Neurologic examination negative. Laboratory, negative.

#### DISCUSSION

DR. DOCK: This case illustrates the modern view of oxycephaly. Though it is a typical case it does not show the steeple head that was formerly associated with the name. On the other hand, it shows to a striking degree the changes in the base of the skull and the effects of pressure. The base shows a great enlargement of the middle fossa, the so-called basilar lordosis, and the short orbits due to the anterior position of the greater wings of the sphenoid. The effect of pressure is shown in the convolutional atrophy, one of the most striking examples of the kind I have seen. The usual explanation is that this is due to the disproportion between the growing brain and the skull. It sometimes develops very suddenly and the whole process brings up a number of interesting questions about intracranial pressure. The statement that the head was normal at 1 year must be taken superficially. It might easily be said to be normal now, if one excludes the exophthalmos and the prominent zygomatic processes. Some cases are born with exophthalmos, but if not it is likely to begin about or after the third year. The importance of the case depends on the fact that much disability can be prevented by timely operation so that the need of roentgen-ray examinations of the base of the skull, in all suspected cases, should be emphasized.

### B. A CASE OF REMOVAL OF THE ARM CENTER FOR THE CURE OF ATHETOSIS.—By DR. ERNEST SACHS.

This girl developed athetosis following a typhoid hemiplegia. There has been a good deal of discussion in recent years as to the cause of athetosis, and most men believe that the conditions involved are due to a disturbance of the lenticular nucleus. In 1908 Victor Horsley removed the arm center on a boy for a similar condition and produced a temporary paralysis of the arm which cleared up in a few weeks and when the motion of the arm returned there no longer were any athetoid movements. This was made the basis of his Linacre Lecture. In 1911

I removed the arm center on a girl for a similar condition with exactly the same result that he obtained. This case differs in one respect from the other two. The paralysis, following removal of the arm center, was not complete. Only the extensor muscles and supinator muscles were affected, though the entire arm center was excised after it had been outlined with an electric current. The question naturally arises whether this proves that athetosis originates in disturbances of the motor cortex or whether von Monakow's theory of diaschisis explains the result.

### FREE COSTAL BARS IN THE EPISTROPHEUS (AXIS).—By PAUL K. WEBB AND JAMES B. BROWN.

During the dissection of the vertebral artery it was found that the anterior boundary of the costotransverse foramen of the epistropheus was movable and subsequent preparation of the region revealed the fact that the costal element of the transverse process was quite independent of the rest of the second vertebra.

The subject was a male negro, whose age was given in the mortuary record at 95 years. There was some variation, partly pathologic and partly, apparently, congenital in the region of the epistropheus, viz.: ankylosis of the articular processes of the second and third vertebra, and of the third and fourth on the right side. The congenital variation consists of absence of the anterior part of the transverse process of the atlas on both sides. The separate costal bars of the epistropheus measure 1 cm. in length and about 3 mm. in diameter, are joined with the base of the transverse process by cartilage, are directed downward and backward, ending in free, rounded extremities. The vertebral artery lay between this costal bar and the posterior element of the transverse process in a costotransverse foramen, whose boundaries, laterally, were incomplete on account of the failure of the costal element to be united with the true transverse process. There seems to be no direct relation between the pathologic condition named, which is apparently of late occurrence, and the independence of the costal element of the epistropheus which is evidently due to independent ossification. These little ossicles are interpreted as true cervical ribs, the occurrence of which is rather frequent in connection with the seventh vertebra, rare in relation to the sixth. No case of cervical ribs in connection with the epistropheus has been reported so far as we know. The absence of the costal bars of the atlas is probably correlated in some way with the independent ossification of the costal bars of the epistropheus.

#### DISCUSSION

DR. R. J. TERRY: Investigations on the occipital bone, atlas and epistropheus by MacAllister, Schwetznikoff and Bolk, especially, indicate that this region of the neck is subject to many variations, most of which are indicative of the tendency to retrogression. The human atlas in its normal state is markedly degenerate in comparison with the typical mammalian first vertebra. A part of the typical musculature connected with the atlas is feebly developed or entirely absent in man, and the first pair of spinal nerves is subject to retrogressive variations. It would seem that in the case presented this evening, which is unique, and the discovery of which is the reward of painstaking faithful work on the part of Messrs. Webb and Brown, the tendency to fall behind in development has effected the epistropheus as well as the atlas, and has resulted in failure to produce the typical compound cervical transverse process by leaving the costal elements free. This observation is of interest and importance to our understanding of the development of processes going on in the head-neck region in man and to the phylogenetic problem as well.



## 2. ANATOMIC AND PHYSIOLOGIC STUDIES OF THE EIGHTH NERVE.—By DR. ERNEST SACHS AND DR. B. Y. ALVIS.

In this piece of work the nerve paths associated with the eighth nerve were studied by the Marchi method. In some of the experiments one or more semicircular canals were destroyed, in others the eighth nerve was cut, and in others lesions were made in the pons to affect Deiters' nucleus. The points investigated were the following:

1. Whether there are any fibers running directly from the ampulla into the medulla.
2. The anatomic pathways of the vestibular and acoustic branches of the eighth nerve in the medulla, pons and cerebellum.
3. The symptoms resulting from cutting the eighth nerve.
4. Symptoms produced by destruction of the semicircular canals.
5. The pathways from the nuclei in which these nerves end to the cerebellum and cerebrum.
6. The symptoms resulting from destruction of the nuclei of the eighth nerve.

The conclusions reached were as follows:

1. There are no fibers running directly from the semicircular canals to the nuclei of the vestibular nerve.
2. The fibers running from Deiters' nucleus anteriorly in the posterior longitudinal bundle are very few in number and stop before they get to the third and fourth nuclei so that it is doubtful if there is any connection between Deiters' and the other nuclei. This is the oculo-vestibular tract spoken of by Wilson and Pike.
3. In the experiments thus far worked up we have found no fibers passing from Deiters' nucleus to the lateral lobes of the cerebellum where the centers Barany has described lie.
4. All anatomic evidence to support Barany's contention as to the connections between Deiters' nucleus and the cerebellum is lacking.
5. There are fibers from Deiters' nucleus that end in the posterior corpus quadrangulum of the opposite side but no neurone goes directly to the external geniculate.
6. All fibers of the vestibular nerve end in one of the three vestibular nuclei or in the nucleus tecti of the vermis.
7. The following symptoms, circus movements, rolling over and over, ataxia, swinging of the head, attitude of the head, hitherto described as due to a lesion of the eighth nerve or destruction of the semicircular canals are due to injuries to the cerebellum or middle peduncle.
8. The so-called cerebellar attitude of the head is due to involvement of the middle peduncle.
9. Nystagmus and deviation of the eye downward and outward are the only constant symptoms observed after pure lesions of either the semicircular canals or eighth nerve.
10. As the vestibular fibers lie so near the floor of the fourth ventricle, the symptoms described by Barany as due to isolated lesions in the pons may be produced by and probably usually are due to the internal hydrocephalus which is a common accompaniment of posterior fossa lesions.

### DISCUSSION

DR. TERRY: I have been very much interested in the progress of Dr. Sachs' investigation of the acoustic pathways, particularly in the studies of Deiters' nucleus. It seems to me that the difficulties attendant on mammalian experimentation in this research might make it well worth while to consider the possibility

of using some of the lower forms, such as the dogfish or sturgeon or shovelfish, all of which have cartilaginous crania and the last two easily obtainable in the Mississippi River.

## 3. A CASE OF ANOMALOUS RIGHT SUBCLAVIAN ARTERY.—By WILLIAM A. HUDSON.

This variation was discovered in the course of a study of the relationships of the recurrent nerve and inferior thyroid artery in the anatomic laboratory. The subject was a poorly nourished white male who, according to the mortuary records, was of middle age and of Scottish parentage. Cause of death, tuberculosis.

From the aortic arch there arose three large vessels, which were from left to right, a trunk bifurcating into the two common carotids, the so-called "bicarotid," the left subclavian and the right subclavian. The latter arose from the descending part of the arch, passed to the right, dorsal to the trachea and esophagus, then to the usual place of the right subclavian on the first rib. It presents a slight fusiform dilatation in that part which is behind the esophagus. Nothing of importance regarding the origin of its branches. The thoracic duct was typical. The left vagus normal; the right vagus passed into the thorax anterior to the anomalous right subclavian and gave off no recurrent branch. The laryngeal muscles of the right side were supplied by the external laryngeal and by an inferior laryngeal nerve which came directly from the right vagus at the level of the sixth cervical vertebra. On reaching the trachea this nerve turned upward around one of the branches of the inferior thyroid artery and entered the larynx.

The author discussed the development of this type of variation, the question of recurrency of the recurrent nerve, the relations to the trachea and esophagus, the position of the thoracic duct and the dilatation of the anomalous vessel which is apparently frequently present as shown in the literature and correlated, as has been thought, with a type of dysphagia.

### DISCUSSION

DR. SACHS: If, as Mr. Hudson states, this more frequent type of variation of the subclavian artery is always accompanied by the variation of the right vagus whereby no recurrent nerve is given off and the laryngeal musculature, excepting the cricothyroid, is supplied by a branch which crosses the neck high up, then this fact should receive the attention of surgeons doing thyroid work. An anomalous inferior laryngeal nerve in the position described in this paper might be injured if its presence was not known.

DR. TERRY: As Mr. Hudson has said, every one of the cases of this variation which has been described in detail shows a certain degree of individuality, which would seem to indicate that the cause of the anomaly whatever it may be is not a single one or if so then the processes of development are differently influenced to bring about varying results. The question of dysphagia is one of the interesting features in some of these cases; I do not know whether the "aneurysmal" swelling of the anomalous vessel is entirely to be assigned as the cause; the innervation of the esophagus may be defective. Death from slow starvation is another interesting condition which has been mentioned in connection with one of these cases, which, if it is a definite correlation, suggests the possibility of interference with the functions of the thoracic duct as well as deglutition. Mr. Hudson has compiled a large series of data from personal observation in the dissecting room during the past four years; the present case is only one of many very interesting variations his careful work has revealed.

#### 4. ELECTROCARDIOGRAPHIC PREPONDERANCE IN COMPARISON WITH ACTUAL VENTRICULAR WEIGHTS, ROENTGEN-RAY AND CLINICAL FINDINGS.<sup>1</sup> A PRELIMINARY NOTE.—By DR. GEORGE R. HERRMANN AND DR. FRED J. HODGES.

We have considered it important to add to the series, of ten cases of Lewis and six cases of Cotton, in which the electrocardiographic findings are compared with actual ventricular weights.

The method used in the preparation and dissection of the hearts was a slight modification of Lewis' method as described in "Heart." Lewis' normal ratio L/R, i. e., left ventricular mass to right ventricular mass was 1.80.

Our series is made up of fifteen cases, as shown in the table. There are three cases in which the electrocardiograms showed definite left ventricular preponderance, and the ratios of the left ventricular muscle mass to the right were, respectively, 2.18, 2.185 and 2.12. The blood pressures in these cases were elevated. Of those diagnosed slight left ventricular preponderance by the electrocardiograms, the first, a case

normal and the L/R ratios were 1.38, 1.40 and 1.70. Two other cases showed no preponderance but were abnormal in that the Q.R.S. intervals were lengthened and consequently the estimation of preponderance unreliable, the L/R ratios were 1.25 and 2.04. Of the last two cases, the one showed a tendency toward left preponderance in the electrocardiograms while the other showed no evidence of preponderance. The curves in these cases were distorted by fling, due to high resistance. The L/R ratios were 1.50 in each.

In conclusion, we may say that in our series there was a close relationship between the electrocardiographic evidence of preponderance and the actual ventricular weight ratios. We met with no discrepancies that could not be accounted for.

The work was begun at the suggestion of Dr. F. N. Wilson, and carried out under his directions.

#### DISCUSSION

DR. WILSON: I take this opportunity of pointing out what is meant when a diagnosis of left or right ventricular preponderance is made. I have found that such diagnoses are sometimes misunderstood. Left

Case	Disease	Age	Blood Pressure		Electrocardiographic Preponderance	Ratio: L. Vent. R. Vent., L/R
			Systolic	Diastolic		
1	Aneurism of aorta, carcinoma of bladder, pulmonary tuberculosis	78	170	110	Left.....	2.18
2	Aneurism of aorta.....	49	120	90	Questionable right.....	1.23
3	Pericarditis (fibrinous), nephritis.....	32	180	140	Slight left.....	2.26
4	Endocarditis (subacute), nephritis, arteriosclerosis	48	180	75	Left.....	2.185
5	Diabetes, carcinoma of breast, arteriosclerosis, organic mitral insufficiency	70	150	58	Left.....	2.12
6	Chronic uremia, carcinoma of prostate, convulsions	57	In convulsion, 260-210; after convulsion, 140	110 75	In convulsion, slight left..... After convulsion, none	1.89
7	Erysipelas, congenital syphilis.....	2½	...	...	Questionable right.....	1.40
8	Acute lymphatic leukemia.....	14	...	...	Questionable right.....	1.28
9	Bleeding, subm. myomata, bronchopneumonia, empyema	45	120	50	None.....	1.38
10	Carcinoma, esophagus and rectum; arteriosclerosis	63	140	75	None.....	1.40
11	Diabetes.....	59	140	70	None.....	1.70
12	Acute intestinal obstruction, pneumonia, auricular fibrillation	64	145	85	None, QRS interval increased...	1.25
13	Purpura hemorrhagica, lobar pneumonia	44	160	70	None, QRS interval increased...	2.04
14	Lethargic encephalitis.....	17	120	...	Tendency to left but unreliable due to fling	1.50
15	Influenza, bronchopneumonia.....	67	90	65	None evident but curves distorted by fling	1.50

of hypertension, had a ratio of L/R-2.26; the second showed slight left preponderance in curves taken during convulsion when the blood pressure was high; curves taken at the lower tension, which was rapidly assumed, showed no preponderance. At present we have no explanation for this. The L/R ratio was 1.89, which is just a high normal ratio.

Of the cases presenting questionable right ventricular preponderance, the first was in a case with a large aortic aneurism which compressed the hilus and upper part of the left lung, the L/R ratio was 1.23. One of the other cases showing questionable right ventricular preponderance was an infant of 8 months with congenital syphilis, the other a boy of 14 years with acute lymphatic leukemia the L/R ratios were 1.40 and 1.28.

Of the two aneurism cases, the one with hypertension had a relative left ventricular hypertrophy, while the other with compression of the lung hilus and upper lobe showed a relative right ventricular hypertrophy.

Three cases showed normal curves with no preponderance. The blood pressures in these cases were

ventricular preponderance does not mean that the left ventricle is beating more strongly than the right, it does not mean that the left ventricular cavity is dilated. It means only, as shown by work such as Dr. Hermann has reported, that the muscle of the left ventricle is relatively increased in mass in comparison with that of the right. The normal electrocardiogram is a combination of right ventricular effects and left ventricular effects and many normal electrocardiograms show evidence of slight preponderance of one or the other chamber. A diagnosis of definite preponderance is only made when the changes are outside normal limits.

The correspondence between the relative weights of the right ventricular muscle and the left ventricular muscle and the form of electrocardiogram is fairly close but not exact and it does not seem to me that the various indices that have been used to determine the exact degree of preponderance shown by the electrocardiogram are of much value.

DR. DOCK: This is a very valuable and praiseworthy piece of work. In the use of the electrocardiograph, as with many other functional tests, there is a tendency to leave previous knowledge and to go on independently of the anatomic factors in disease. Dr.

1. From the Department of Internal Medicine and Pathology, Washington University Medical School.



Herrmann has made a very good beginning and it is to be hoped he can continue and add to his material. The cases he has had so far do not include some of the most important test objects and especially cases of hypertrophy from various causes other than valvular disease. In such examinations it will be useful to examine not only the weight of the respective ventricles but also, by the method of serial sections to ascertain the condition of the musculature and the amount of fibroid material or other nonfunctioning tissue. Points of interest may be found in the relative weights of papillary muscles as compared with the ventricles. There is a striking difference in some cases in the mass of papillary muscle with or without fibroid degeneration.

DR. SACHS: Some twenty years ago Dr. A. B. MacCallum of Johns Hopkins described the musculature of the heart as being in the shape of a letter "S." I am wondering if the dissection of the ventricles of the heart as he has carried it out is a true division of the right and the left ventricle and whether dividing it arbitrarily as he does, he really gets a true picture of the right and the left ventricular and whether, therefore, his weights of these separate portions of the heart are to be considered accurate.

DR. WILSON: In answer to Dr. Sachs' question, I may say that the course of the excitation wave through the ventricular muscle is not influenced by the arrangement of the muscle bundles and the arrangement of these bundles is without influence on the electrocardiogram. In the method used for dividing the heart an attempt is made to separate those areas of muscle whose electrocardiographic effects are opposed. Thus, the effects produced by the free wall of the right and those produced by the free wall of the left ventricle are almost directly opposed to each other. In our comparison of ventricular weights and electrocardiograms we try, therefore, to compare the relative weights of these muscle masses and disregard that portion of the muscle of each ventricle which goes to make up the septum.

#### CAPE GIRARDEAU COUNTY MEDICAL SOCIETY

Cape Girardeau County Medical Society met in regular session at Jackson, at 8 p. m., Dr. O. L. Seabaugh presiding. The following members were present: Drs. Vinyard, Hays, Statler, Henderson, Taylor, D. I. Seabaugh, Hope, Seibert, Berry. Visitor, Dr. W. G. Patton.

The minutes of the previous meeting were read and approved. Motion was made and carried that the chair appoint a necrology committee of two. Dr. George W. Vinyard and Dr. W. K. Statler were appointed.

The necrology committee read a memorial of Dr. Robert F. Wichterich which was ordered spread on the minutes, a copy sent to the state JOURNAL, and a copy sent to the bereaved family.

After the business meeting was over the following program was rendered:

Dr. Hay's talk on the heart was inspiring and instructive. His able discussion of the anatomy, histologic and pathologic changes of the heart is evidence of his thorough understanding of the heart and its diseases. Every member present felt that he had learned something by Dr. Hay's talk.

Next on the program was Dr. D. I. Seabaugh, on "Goiter," which was also an excellent paper, going into the causes of the different types of goiter, taking up the exophthalmic, toxic and nontoxic varieties, also going into the details of etiology, symptoms and pathologic changes of the thyroid, and the treatment.

It showed that he had given his subject a good deal of thought. He cited several cases in his own practice that were of much interest.

After a thorough discussion by most of the members present we went home feeling that we had spent a very profitable evening.

J. W. BERRY, M.D., Secretary.

#### CARROLL COUNTY MEDICAL SOCIETY

The Carroll County Medical Society met at the Florence Hotel, Carrollton, June 25, at 8 p. m.

The first part, and a very important part, of the program, was a banquet consisting of everything good to eat—both the digestible sort as well as some indigestible kinds. After no one could hold another bite, and all were in plainly visible distress amidst the rest of the program was rendered.

Dr. Samuels lit an ancient—very ancient—pipe and soon everybody present forgot about his overloaded stomach and began to gasp for fresh air. All the electric fans were turned on and when the fog finally cleared we saw the speaker of the evening, Capt. Berryhill of the U. S. Navy.

Dr. Berryhill, a former Carroll County boy, has served thirty-four years in the navy and gave us a very interesting talk on "Medical Life in the U. S. Navy." At the conclusion of his talk Dr. Berryhill was elected an honorary member of the Carroll County Medical Society.

The other speaker of the evening was Dr. Ola Putman of Marceline. He gave us a very interesting talk on "Mistakes We Often Make."

The following physicians were present: Captain Berryhill, Drs. Ola Putman, William G. Atwood, C. S. Austin, William G. Brown, William D. Colby, R. F. Cook, E. H. Musson, Lynn Samuels, C. S. Williams, W. S. Windsor, I. M. Wooden, H. B. Scovern and E. E. Brunner.

Dr. Putman had just completed his talk when some one suggested that "those ripe olives did not taste right." Soon everybody began watching everybody else but when no fatal symptoms showed up the meeting adjourned.

E. E. BRUNNER, M.D., Secretary.

#### CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in Harrisonville, June 10, with the following members present: Drs. Chaffin, Crawford, Dargatz, Dodd, Overholser, Ramey, Triplett. Dr. Douglass, a dentist from Belton, was present as a guest of the society.

Dr. F. E. Dargatz read a paper entitled, "Roentgen-Ray Diagnosis of Infective Processes in the Teeth." This paper was illustrated with lantern slides of roentgen-ray photographs. The subject, being one of great interest to the medical and dental professions at the present time, brought out quite an interesting discussion. The doctors present reported cases under observation that resulted from infected teeth and relief was afforded after extraction. Dr. Douglass, a dentist who took part in the discussion, brought out many interesting points.

A motion was passed inviting the dental profession of Cass County to attend the meetings and participate in the program.

This was the first meeting of the society since the December meeting, as the day for the March meeting was so stormy that no one attended. The next meeting will be held on September 9, and we have arranged an excellent program for that meeting. We hope there will be a full attendance.

H. S. CRAWFORD, M.D., Secretary.

### HENRY COUNTY MEDICAL SOCIETY

The Henry County Medical Society met in regular session at Windsor, Wednesday, June 16. There were present, with the president, Dr. Will P. Bradley, and secretary, Dr. F. M. Douglass, Drs. M. E. Bradley, T. A. Blackmore, C. W. Head, R. J. Jennings, H. M. Wall, J. H. Walton, E. C. Peelor, J. G. Beaty, S. A. Poague, J. R. Hampton, and visitors, E. Y. Pare, Leeton; H. A. Hite, Greenridge; P. T. Bohan and B. A. Poorman, Kansas City, and E. J. Goodwin, secretary, Missouri State Medical Association.

President Bradley called the meeting to order at 2 p. m. The minutes of the previous meeting were read and approved.

The secretary made a short talk on candidates for office who would influence legislation and enforce present medical laws, and why all were interested.

Dr. Bohan read a history of several cases of different diseases, each case one of a type of many that he had seen, and gave the symptoms that made a clear diagnosis. Then he discussed them and their treatment in a manner that gave each one present a good comprehension of them; no trouble to understand the reason why each case was a complete clinic of itself; one could almost see the patient as though present. Dr. Poorman gave his views on ventral hernia, the causes, and his manner of operating and treatment that brought a new thought to all. It was very good to listen to even though the lantern burned out and he could not illustrate the slides which he had brought.

Dr. Jennings brought before us a girl, 13 years of age, with arthritis deformans. Dr. Bohan discussed the case and outlined treatment.

Dr. Hampton had a man present, 43 years old, in good health, who could not sleep, neither sitting, standing or lying; no cause could be found. Dr. Bohan advised treatment.

Dr. Walton showed some plates of a case and Dr. Poorman discussed the case.

Dr. Goodwin gave us a talk on the duties that each member of the society should take in the matter of future legislation. The doctors all have an influence and should use it for the benefit it has on the general health of all the people. It is the public that we should work for.

F. M. DOUGLASS, M.D., Secretary.

### JASPER COUNTY MEDICAL SOCIETY

The Jasper County Medical Society adjourned for the summer months following a clinical meeting held June 15, at St. John's Hospital, Joplin.

The clinic was the first of its kind ever held in Joplin and its pronounced success has prompted the members of the society to make arrangements to repeat the affair several times during the next year.

The program consisted of an afternoon operative clinic at which eighteen major operations and eight minor ones were performed. Drs. Grantham, Powers, Gregg, Williams and Chenoweth did the operating. Dr. Grantham demonstrated his operation for Pott's disease and was the most interesting operation of the day.

At 6 o'clock a chicken dinner was served at the hospital and at 8 o'clock the medical clinic was held.

There were over fifty out-of-town physicians present, every city in the Tri-State District being represented. The total attendance was seventy-six.

H. C. POWERS, M.D., President.

### PEMISCOT COUNTY MEDICAL SOCIETY

The Pemiscot County Medical Society met in Caruthersville, Tuesday, July 6, in the Hall of Commerce. Dr. Pinion presided with the following members present: Drs. Lutten, Collins, Michie, Grainger,

Phipps, L. D. Denton and Cooper. Dr. J. A. Bryant of Steele was a visitor.

A very interesting paper by Dr. T. J. Collins on "Appendicitis" was read and enjoyed by all, with some discussion by Dr. Pinion.

The application of Dr. J. A. Bryant, formerly of Gideon, was reported favorably by the board of censors and laid over to the next meeting.

Dr. J. C. Faris, whose appreciation was reported favorably at the last meeting, was elected to membership.

Our meetings of late have been more interesting and worth while, and we believe they will continue to improve.

L. E. COOPER, M.D., Secretary.

### SCOTT COUNTY MEDICAL SOCIETY

The Scott County Medical Society met in the Circuit Court room at Benton, Tuesday, July 6. The president, Dr. L. S. Mayfield of Illmo, being sick and not able to attend, Dr. S. J. Wade called the meeting to order. The following members were present: Drs. J. A. Cline, J. W. Trisler, P. M. Malcolm, C. D. Harris, Sylvester Doggett, W. S. Hutton, G. T. Dorris, T. R. Frazer, E. J. Nienstedt. Visitors: Dr. H. S. Winters of Oran, Dr. A. Traubitz of Vanduser. The minutes of the previous meeting were read and approved.

A case of imperforate vagina was reported by Dr. Malcolm. The outcome is yet to be determined as an operation is contemplated but has not as yet been done.

Dr. T. R. Frazer delivered a very able address on the comparison between typhoid fever and malarial fever.

The secretary was instructed to communicate with the Cape Girardeau City Medical Society and the Cape Girardeau County Medical Society relative to an infringement of the fee bill of the Scott County Medical Society by a certain Cape Girardeau physician who charged less than \$5 for examinations for old line life insurance companies.

E. J. NIENSTEDT, M.D., Secretary.

### VERNON COUNTY MEDICAL SOCIETY

The Vernon County Medical Society met in regular session on Thursday, June 10, in Nevada. The morning session was held at the Vernon Hospital and numerous very instructive clinics were present for diagnosis. Among them were several cases of disease of the nervous system and one case of infection of the antrum of Highmore on both sides.

Dr. Blakesley of Kansas City operated on a young man, making a submucous resection for deviated septum, using local anesthesia successfully by means of cocaine. One supravaginal hysterectomy was done for fibroid tumor and the left ovary removed by Dr. Stebbins of Clinton, who is also the proprietor of Vernon Hospital at Nevada.

After dinner the society met in regular session at the courthouse and Dr. A. L. Skoog of Kansas City held a very interesting clinic on disease of the nervous system. Dr. R. L. Russell, of the State Board of Health and U. S. Public Health Service, lectured on legislation in regard to the control of venereal diseases. This in turn was succeeded by a lecture by Dr. Skoog, his subject, "Paresis," in which he dwelt in extenso on the causes—syphilis being the chief one—the pathologic anatomy, symptoms, diagnosis, prognosis and treatment of the disease.

Dr. Blakesley read a paper on "Vincent's Angina," vividly picturing the possible extension of the disease to nearly all parts of the throat and mouth, including the bony structures. He gave the history of many cases he had treated and said he used a weak solution of formalin to overcome the fetor and applied ars-



phenamin to the diseased surface. An applicator wrapped in cotton is dipped in glycerin, then into the arsphenamin and liberal applications made several times a day. This treatment he has found very successful. An interesting case of this disease in a young, robust man was shown and pronounced typical. Dr. Ferguson of Sedalia, president of the State Medical Association, was introduced and made a short speech and promised to be present again in the near future.

A motion prevailed thanking these gentlemen for their attendance and lectures and they were duly elected honorary members of this society.

In addition to the Nevada physicians a number were present from outside of Nevada, among them, besides the gentlemen already mentioned, Drs. Cline and Smith, Appleton City; Douglass and Stebbins, Clinton; Schaff, Moundville; Keithley, Milo; Altham and Musser, Metz, Walker, Harwood; Liston, Walker, and Curl, Schell City.

The meeting was a success and profitable to all. There is much professional enthusiasm present among the physicians of Vernon County.

E. A. DULIN, M.D.

## BOOK REVIEWS

**GENERAL AND DENTAL PATHOLOGY, With Special Reference to Etiology and Pathologic Anatomy. A Treatise for Students and Practitioners.** By Julio Endelman, M.S., D.D.S., Professor of Special Dental Pathology, College of Dentistry, University of Southern California, and A. F. Wagner, A.M., M.D., Professor of General Pathology, College of Dentistry, University of Southern California. With 440 illustrations, of which 340 in the section on Dental Pathology are original, and 4 colored plates. St. Louis: The C. V. Mosby Company, 1920. Price, \$7.

The subject of dental pathology is thoroughly covered in a very readable manner, enough general pathology being given to show the relation between general and dental pathology.

At this time, when teeth are being regarded as the source of many pathologic disturbances, this book is most timely and should be studied generally by members of both the medical and dental professions.

The book is elaborately illustrated and printed on the best of paper. The publishers and authors are to be congratulated for producing such a complete work on this subject.

E. W. S.

**REGIONAL ANESTHESIA (Victor Pauchet's Technic).** By B. Sherwood-Dunn, M.D., Officer d'Academie; Surgeon (Colonel) Service de Sante Militaire de Paris. With 224 figures in the text. Philadelphia: F. A. Davis Company, Publishers, 1920. Price, \$3.50 net.

This book purports to present Victor Pauchet's technic. It begins with an argument pro and con relative to the advantages of local anesthesia. Then follows a chapter on armamentarium and on the general principles of technic. The apparatus illustrated is evidently French and not obtainable in this country. The succeeding five chapters take up the various operations according to regions.

The various steps advised are those conventional to foreign literature on the subject and may be regarded as satisfactory though briefly presented. The presentation is needlessly marred by the inclusion of spectacular features. Nothing is gained, for instance, in depicting a young woman with her jaw removed, nor in showing a lady with a broad smile while undergoing an operation for the removal of the appendix. Nothing is shown but the smile and a handful of

instruments lying on her belly. As a presentation of a smile it is very good, but the book purports to treat of local anesthesia and certainly the picture does nothing to further this subject. The purpose of these things evidently is to emphasize the fact that these operations can be done. This is quite unnecessary. That it is so is quite generally known.

A. E. H.

**DISEASES OF THE CHEST AND THE PRINCIPLES OF PHYSICAL DIAGNOSIS.** By George W. Norris, M.D., Assistant Professor of Medicine in the University of Pennsylvania, and Henry R. M. Landis, M.D., Assistant Professor of Medicine in the University of Pennsylvania, with a chapter on Electrocardiograph in Heart Disease, by Edward Krumbhaar, Ph.D., M.D., Assistant Professor of Research Medicine in the University of Pennsylvania. Second edition, thoroughly revised. Octavo volume of 844 pages, with 433 illustrations. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, \$8 net.

The fact that this is a second edition, with the first edition exhausted in less than two years, demonstrates that this book has filled a need and has been accepted by the profession. Even a cursory examination shows that this acceptance was justified and that the second edition should be even more popular.

The study of the literature of the world wide epidemic of influenza in 1918-1919 is not yet completed, but the authors have summarized well the results up to the time their manuscripts were sent to press. A future edition will doubtless change some of their conclusions, especially when the work of Rosenow and his collaborators shall have been completed.

Mycotic infections of the lungs, about which there is an increasing literature, have been summarized by Dr. Landis, who, however, does not accord them the importance that some of the writers on these subjects have assigned them. Nevertheless, they must be kept in mind by the general practitioner who is called on to diagnose incipient pulmonary troubles.

In cardiac diseases the causal classification advocated by Cabot is not found by the authors adequate to cover all the manifestations of these disorders. The authors, therefore, keep the reader's attention focused on the anatomic changes.

As the title would indicate, the authors do not discuss more than inferentially the treatment of the diseases studied.

The illustrations are excellent both because they elucidate the text and because they are of themselves instructive. The physician will find them useful for frequent reference, especially those showing hardened sections of the lungs and the topography of the chest.

G. H. H.

**A TEXTBOOK OF DERMATOLOGY.** By J. Darier, Physician to the Hôpital Saint-Louis, Member of the Academy of Medicine, Paris, France; Honorary Member of the American Dermatological Association, etc. Authorized translation from the second French edition. Edited with notes by S. Pollitzer, New York, ex-President of the American Dermatological Association; Corresponding Member of the French Society of Dermatology and Syphilography, etc. Illustrated with 204 engravings and 4 colored plates. Philadelphia and New York: Lea and Febiger, 1920. Price, \$8.50.

From those of us who have long been familiar with the first edition of Darier's little book in the original French this edition in English is bound to receive a warm welcome.

The subject matter is presented clearly and concisely and as comprehensively as might be expected in a volume of this size. In the preface appears the statement that "a book of this kind does not aim at replacing the classical treatises, but is meant to serve as an introduction to and summary of these larger works." Despite the optimism of the author, the

amateur dermatologist and the beginner will find the book rather hard sledding at first, for the Gallic classification and manner of presentation differ materially from the American; but the meat is there if one can but extract and assimilate it.

The translation is well and smoothly done. It is unfortunate that the editor did not see fit to insert more notes, such as the one under the treatment of syphilis, delineating his personal views on various of the subjects discussed.

The illustrations are admirable, and the press work excellent. The book should have a place in the library of every dermatologist.

R. L. S.

**MANUAL OF PSYCHIATRY.** Edited by Aaron J. Rosanoff, M.D., Clinical Director, Kings Park State Hospital, N. Y., Lieutenant-Colonel, Officers' Section, Medical Reserve Corps, U. S. Army. Fifth edition, revised and enlarged. New York: John Wiley and Sons, Inc. London: Chapman and Hall, Ltd., 1920.

This, the fifth edition, by J. Rosanoff, published last January, brings up to date a subject material first covered by the authors in 1905. The following authors are responsible for their allotted portions of the book; Aaron J. Rosanoff, M. D.; H. L. Hollingworth, Ph.D.; Miss Mary C. Jarrett, and Clarence A. Neymann, M.D.

As some already may know, this convenient manual first appeared as a translation of the French "Manuel Psychiatrie," by J. Rogues de Fursac. A number of these manuals on various subjects by different authors appear from time to time in France where they enjoy much professional popularity.

Some of the titles may appear as treated rather briefly, but they are concise and to the point and may be adequate for a book of this size. The portions of the text which deal with mental tests, and some others, may be too complex for the average general practitioner, but they appeal to him and no doubt will be readily digested.

Classification, which can always bring forth discussions before psychiatric associations, is carefully considered in this work. Two are given: one, which is found in a number of the modern psychiatric works, is by Kraepelin. The other, a more comprehensive one, is that accepted by the American Medico-Psychological Association, published first in May, 1917.

Both the organic and functional diseases are carefully considered and given due space. Particular attention might be called to the subject considered under constitutional psychopathic states, defects in personality, emotional instability, criminals, sexual abnormalities, and nomadism. Various elaborate tests for mental capacity are considered. The method for scoring is also given. The endocrine gland system is considered only as far as the thyroid gland is concerned. It might be suggested that some of the other endocrine glands should have been given consideration.

The arrangement of the material is to be commended. The type is excellent and with the arrangement makes reading easy. There are two quite complete indices, one of author and one of subject material covered in the book.

A. L. S.

**A NURSE'S HANDBOOK OF OBSTETRICS.** By Joseph Brown Cooke, M.D., Fellow of the New York Obstetrical Society, etc. Ninth edition, revised and enlarged, by Carolyn E. Gray, R.N., Superintendent of City Hospital School of Nursing, Blackwell's Island, New York City, and Philip F. Williams, M.D., Instructor in Obstetrics, School of Medicine, University of Pennsylvania. With 189 illustrations, 4 full pages in color. Philadelphia and London: J. B. Lippincott Company.

The reviewer had the pleasure of discussing the first edition of this popular handbook in 1903, and it has been interesting to watch the gradual development of the text and the class of illustrations as each succeeding printing marked the progress of the nursing

profession in obstetrics. The revision has allowed for the incorporation of valuable material. One of the most timely is the section on prenatal care which is well written, concise and complete. Diagnosis, puerperal care, and the chapter on treatment and feeding of the new-born, are especially to be commended. It is to be regretted that so much space is given to a subject like curettage which in modern obstetric technic is considered *passee*. In our service the Barnes bag is superseded by the Voorhees cone-shaped bag for induction of labor, as results are more definite and accurate. We find the fetal pulse normally 120 to 145—150 is considered above the limit.

The revision by a nurse of the ability of Miss Gray is a happy consummation and adds interest because it gives the viewpoint of both medical and nursing professions.

G. C. M.

**SIMPLIFIED INFANT FEEDING.** With Eighty Illustrative Cases. By Roger H. Dennett, B.S., M.D., Associate Professor of Diseases of Children, New York Post-Graduate Medical School, etc. With 14 illustrations. Second edition, revised and enlarged. Philadelphia and London: J. B. Lippincott Company.

Dr. Dennett has done good work in trying to simplify infant feeding. His method is really that used by practitioners 100 years ago, that is, milk is diluted with water and sugar is added, and in this respect one might think that there is a retrogression. However, his directions for the use of this simple formula and its indications and contraindications, based on the recent physiology of the infant, make the method very successful.

The only method advised to render the curds digestible is boiling. For young infants and infants with feeble digestive power he recommends the use of dry milk. For the general practitioner we consider his directions very safe; for the specialist we question whether this simplified method would be considered sufficient.

We regret that a chapter is not devoted to the use of buttermilk and its modifications. He does give a description of protein milk, but it is hard to prepare in the home and few practitioners would undertake to use it.

His condemnation of milk sugar we think is too sweeping, and we protest against giving infants suffering from cholera infantum, who are often on the border of a convulsive seizure, strychnia in any form.

The practical directions for breast feeding are very good. We do not quite understand why he should lay so much stress on Keller's malt soup preparation since it is a method of feeding that is not simple and should be used only by the specialist.

We like his method of treating diarrhea in bottle-fed infants but since he uses cane sugar by preference we cannot understand why he should have left condensed milk out of consideration. A chapter devoted to this common food, giving its indications and contraindications, would seem appropriate in simplified feeding.

The practitioner will derive great benefit from reading this book.

J. Z.

**ARTERIOSCLEROSIS AND HYPERTENSION.** With Chapters on Blood Pressure. By Louis M. Warfield, A.B., M.D. (Johns Hopkins), F.A.C.P. Formerly Professor of Clinical Medicine, Marquette Medical School. Third edition. St. Louis: C. V. Mosby Company, 1920. Price, \$4.

This book offers a definite framework for understanding and action in a field but little explored, and is valuable therefore to the practitioner. It is particularly valuable in being free from unfounded theories and speaks with rare saneness and reserve on topics allied to the general discussion, such as the influence of internal secretions.



The author accomplishes his expressed desire to inject the personal element and writes with conversational directness and with decision. The book closes with an interesting collection of the author's axioms.

In arranging the contents it seems strange to put a treatise on the pathology of arteriosclerosis between chapters on normal structure and normal function of blood vessels, and to discuss the etiology of arteriosclerosis after describing the complications.

The chief value of the volume lies in the fact that it provokes a desire to learn more about this very important disease. This edition should receive just as much demand as its predecessors. R. A. K.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1920, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**CELLU FLOUR.**—A specially pure cellulose in the form of flour. It is used as a means of filling out reduced diets, as in the Allen treatment for diabetics. It satisfies hunger without furnishing nourishment. Cellu Flour, after admixture with bran, baking powder, eggs, "India gum," or liquid petrolatum in varying proportions, may be used for the preparation of imitation bread, muffins, etc. Dietetic Cellulose Company, Chicago.

**DIAPROTEIN PREPARED CASEIN FLOUR.**—Casein, to which has been added 4 per cent. of a leavening mixture. It is employed in cases, such as diabetes, etc., in which carbohydrates are contraindicated. Diaprotein Prepared Casein Flour is adapted for the preparation of bread, cakes, etc. Diaprotein Company, Chicago.

**ANESTHESIN-ABBOTT.**—A brand of benzocaine (see New and Nonofficial Remedies, 1920, p. 33) complying with the N. N. R. standards. The Abbott Laboratories, Chicago (*Jour. A. M. A.*, June 5, 1920, p. 1577).

**POLLEN EXTRACTS-ARLCO.**—Liquids obtained by extracting the proteins from the pollen of various species of plants. For a discussion of the actions, uses and dosage of pollen extracts see New and Nonofficial Remedies, 1920, p. 226. Each of the Arlco products listed below is marketed in sets of four vials representing graduated concentrations: 1:10,000, 1:5,000, 1:1,000 and 1:500, respectively; also in concentrated solution in capillary tubes for diagnostic tests. For hospital use the diagnostic solution is supplied in 1 Cc., 2 Cc. and 3 Cc. containers.

Aster Pollen Extract-Arlco, from pollen of *Aster multiflorus* (?).

Birch Pollen Extract-Arlco, from pollen of *Betula populifolia*.

Cherry Pollen Extract-Arlco, from pollen of *Prunus species*.

Clover Pollen Extract-Arlco, from pollen of *Trifolium species*.

Corn Pollen Extract-Arlco, from pollen of *Zea mais*.

Dahlia Pollen Extract-Arlco, from pollen of *Dahlia variabilis*.

Daisy Pollen Extract-Arlco, from pollen of *Crysanthemum leucanthemum*.

Dandelion Pollen Extract-Arlco, from pollen of *Taraxacum officinale*.

Dock Pollen Extract-Arlco, from pollen of *Rumex acetocella*.

Elm Pollen Extract-Arlco, from pollen of *Ulmus americana*.

Goldenglow Pollen Extract-Arlco, from pollen of *Rudbeckia laciniata*.

Goldenrod Pollen Extract-Arlco, from pollen of *Solidago species*.

Hickory Pollen Extract-Arlco, from pollen of *Carya alba*.

June Grass Pollen Extract-Arlco, from pollen of *Poa pratensis*.

Locust Pollen Extract-Arlco, from pollen of *Robinia pseudacacia*.

Maple Pollen Extract-Arlco, from pollen of *Acer rubrum*.

Narcissus Pollen Extract-Arlco, from pollen of *Narcissus species*.

Oak Pollen Extract-Arlco, from pollen of *Quercus species*.

Orchard Grass Pollen Extract-Arlco, from pollen of *Dactylis glomerata*.

Poplar Pollen Extract-Arlco, from pollen of *Populus balsamifera*.

Poppy Pollen Extract-Arlco, from pollen of *Papaver somniferum*.

Ragweed Pollen Extract-Arlco, from pollen of *Ambrosia trifida*.

Ragweed Pollen Extract-Arlco, from pollen of *Ambrosia artemisiaefolia*.

Red Top Pollen Extract-Arlco, from pollen of *Agrostis alba*.

Rose Pollen Extract-Arlco, from pollen of *Rosa rugosa*.

Rye Pollen Extract-Arlco, from pollen of *Secale cereale*.

Sunflower Pollen Extract-Arlco, from pollen of *Helianthus annuus*.

Timothy Pollen Extract-Arlco, from pollen of *Phleum pratense*.

Walnut Pollen Extract-Arlco, from pollen of *Jugland nigra*.

Willow Pollen Extract-Arlco, from pollen of *Salix fragilis*.

Arlington Chemical Company, Yonkers, N. Y.

**ANTIPNEUMOCOCCUS SERUM (POLYVALENT) TYPES I, II AND III.**—An antipneumococcus serum (see New and Nonofficial Remedies, 1920, p. 269) prepared by immunizing horses with dead and living pneumococci of the three fixed types and standardized against Type I culture. Marketed in double ended vials containing 50 Cc. each, with needle and tubing; also in bottles of 100 Cc. Lederle Antitoxin Laboratories, New York.

**PERTUSSIS BACILLUS VACCINE.**—A pertussis bacillus vaccine (see New and Nonofficial Remedies, 1920, p. 285) prepared from several strains of pertussis bacillus (Borget-Gongou). Marketed in packages of four syringes containing 250, 500, 1,000 and 2,000 million killed bacteria, respectively; in packages of four ampules containing 250, 500, 1,000 and 2,000 million killed bacteria, respectively; also in 5, 10 and 20 Cc. vials containing 2,000 million killed bacteria per cubic centimeter. Gilliland Laboratories, Inc., Ambler, Pa. (*Jour. A. M. A.*, June 26, 1920, p. 1779).

### PROPAGANDA FOR REFORM

**CHAULMOOGRA PREPARATIONS AND SODIUM MORRHUATE.**—Chaulmoogra oil and preparations made from it are at present extensively employed and seem to produce amelioration in the majority of lepers to whom it has been administered persistently. Investigation has shown that chaulmoogra oil contains bactericidal substances that are one hundred times more active than phenol, and that this bactericidal action is specific for the acid fast group of bacteria to which

the causative organism of leprosy belongs. The product is inactive against all other organisms studied. On the other hand, it has been shown that sodium morrhuate and the fatty acids of cod liver oil do not have a similar action in tuberculosis which is also due to an acid fast bacterium. The value of chaulmoogra preparations in tuberculosis remains to be demonstrated, and their clinical trial should await their experimental investigation. The indiscriminate use of drugs in tuberculosis may arouse false hopes and may not be without danger to the patient (*Jour. A. M. A.*, June 5, 1920, p. 1578).

**SYRUP LEPTINOL.**—The Council on Pharmacy and Chemistry reports that Syrup Leptinol (formerly called Syrup Balsamea) is inadmissible to New and Nonofficial Remedies, first, because the manufacturer failed to give the profession information either in regard to the amount of the potent ingredient or the method of determining its identity and uniformity; secondly, because of the unwarranted recommendation for its use in such infectious diseases as pneumonia and epidemic influenza and the lack of satisfactory supporting evidence of the alleged therapeutic efficacy in other diseases; and thirdly, because the recommendation for its use appearing on and in the trade package constitutes an indirect advertisement to the public. Syrup Leptinol is marketed by the Balsamea Company of San Francisco. It is a balsamic syrup made from an unclassified species of *Leptotaenia* (a plant belonging to the parsnip family) which grows in Nevada. No evidence was presented to show that it had the remarkable properties ascribed to it by the Balsamea Company. The clinical reports which were reported were little more than chance observations and lacked all control (*Jour. A. M. A.*, June 5, 1920, p. 1590).

**WARNING AGAINST UNTRIED MEDICAMENTS.**—The United States Public Health Service has issued a circular regarding the use of arsenic preparations in the treatment of syphilis, in which it invites attention to the extensive exploitation of various arsenic preparations which are not related to the arsphenamin group. It is held that the subcutaneous, intramuscular or intravenous use of arsenic in the treatment of syphilis should be confined to the arsphenamin group, as these agents are now of established value and are produced under the supervision of the Public Health Service (*Jour. A. M. A.*, June 12, 1920, p. 1654).

**WHAT IS THE THERAPEUTIC VALUE OF THE HYPOPHOSPHITES?**—A research conducted by the Council on Pharmacy and Chemistry shows: There is no reliable evidence that they exert a physiologic effect. It has not been demonstrated that they influence any pathologic process. They are not foods. If they are of any use, that use has not been discovered. The hypophosphites were introduced into medicine by Churchill, who advanced the theory, long since discarded, that the so-called tuberculosis diathesis was due to a phosphorus deficiency. It is now known that little phosphorus, if any, is assimilated from hypophosphites—far less than from phosphorus compounds of ordinary foods. As a result of the power of advertising, many physicians still prescribe hypophosphite combinations (*Jour. A. M. A.*, June 12, 1920, p. 1661).

**MORE MISBRANDED NOSTRUMS.**—The following "patent" medicines have been the subject of prosecution by the federal authorities, chiefly because the therapeutic claims made for them were false: Sealeaf Emulsion, an emulsion of cod liver oil and malt extract; Green Mountain Herb Tea, and Sabine's Indian Vegetable Tea, consisting essentially of senna, fennel, elder flowers, anise, triticum, sassafras, American saffron, coriander, licorice root, butternut bark, buckthorn and Epsom salt; Sabine's Indian Vegetable

Cough Balsam, consisting essentially of alcohol, chloroform, tar, resin, sugar and traces of alkaloids; Bovinina, apparently a meat extract; Fruit-a-Tives, containing essentially extracts of aloes, nux vomica and cinchona bark; Anticalculina Ebrey, consisting essentially of alcohol, colchicin, ammonium salts, vegetable extractives and water; McDowell Ginseng Bitters, a solution of plant extract, containing small quantities of glycerin and a zinc salt (*Jour. A. M. A.*, June 12, 1920, p. 1661).

**QUALITY OF ACETYSALICYLIC ACID.**—The following brands of acetylsalicylic acid have been found of satisfactory quality and are in New and Nonofficial Remedies: Acetylsalicylic Acid-Heyden, Acetylsalicylic Acid-M. C. W., Acetylsalicylic Acid-Merck, Acetylsalicylic Acid (Aspirin)-Monsanto, Acetylsalicylic Acid-P. W. R., Acetylsalicylic Acid-Squibb, and Aspirin-L and F. An examination made in the A. M. A. Chemical Laboratory two years ago showed that the product supplied as acetylsalicylic acid was of equal quality with the German made Aspirin Bayer. The Aspirin Bayer now made in America and exploited with misleading claims is controlled by the Sterling Products Company, which sells cascavets, danderine, etc. (*Jour. A. M. A.*, June 12, 1920, p. 1664).

**FORMITOL TABLETS.**—In a report of the Council on Pharmacy and Chemistry, it was stated that Formitol Tablets of the E. L. Patch Company contained formaldehyd (or paraformaldehyd) and some hexamethylenamin, and that the formaldehyd (or paraformaldehyd) had been produced by the decomposition of the hexamethylenamin originally present in the tablets. The Council now reports that the Patch Company declares that no hexamethylenamin is used in the manufacture and that, therefore, that which was found must have been produced from the formaldehyd and ammonium chlorid in the tablets. The Council further reports that a printed sheet received from the Patch Company conveyed the information that Formitol Tablets contained ammonium chlorid, benzoic acid, citric acid, guaiac, hyoscyamus, menthol, paraformaldehyd and tannic acid, but gave no information as to the amounts of any of the ingredients except that each tablet was declared to represent 10 minims of a 1 per cent. formaldehyd solution. Because of the non-quantitative, and, therefore, meaningless "formula," the A. M. A. Chemical Laboratory made an analysis of the tablets. The analysis indicated that the combined weight of all the claimed active ingredients is less than 1 grain per tablet! Formitol Tablets furnish a good illustration of some well established truths: 1. "Formulas" that are nonquantitative are valueless or worse than valueless. 2. The fact that a manufacturer puts certain drugs in a mixture is no proof that these drugs are there when the mixture reaches the patient. 3. Complex mixtures should be avoided. It is absurd to expect, as is claimed in the case of Formitol Tablets, anodyne, antiseptic, astringent, expectorant and resolvent action, all at the same time (*Jour. A. M. A.*, June 19, 1920, p. 1730).

**FORMULA FOR MOUTH WASH.**—Castile soap, dried and granulated, 6.00 gm.; benzosulphimid, 0.20 gm.; basic fuchsin, 0.002 gm.; oil of cassia, 0.50 c.c.; oil of peppermint, 0.50 c.c.; oil of cloves, 1.00 c.c.; alcohol, 75 c.c.; water to make 100 c.c. A few drops added to water to be used as a mouth wash. It will be noted that, except for the volatile oils present, antiseptics are conspicuous by their absence. It is impossible to disinfect the mouth. Mere bacteriostatic (germ growth inhibitive influence of antiseptics can be of value only as long as the agent is present; and the time that one is willing to keep the mouth full of fluid is limited. The chief virtue of mouth wash preparations lies in their esthetic qualities, their pleasant appearance, odor and taste, which induces their use (*Jour. A. M. A.*, June 19, 1920, p. 1732).



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### ORIGINAL ARTICLES

#### FULL TERM EXTRA-UTERINE PREGNANCY\*

QUITMAN U. NEWELL, M.D.  
ST. LOUIS

It has been my good fortune in the past eight years to have a part in dealing with three cases of full term extra-uterine pregnancy which have not thus far been reported; two in which living fetuses were delivered and one in which a fetus dead for sometime previous to operation was obtained. All the mothers survived the experience in good shape.

I wish to associate with the term full term extra-uterine pregnancy, the terms abdominal pregnancy at term and ectopic gestation in advanced cases. In going through the literature I find this most interesting and serious condition of pregnancy described under all of the three titles and practically we must assume them as describing one and the same condition.

It is useless for our purpose to describe the number of cases reported in the literature as some authors have attempted, for there are many case reports overlooked or instances never reported, so that complete and accurate statistical data cannot be obtained. I will try to treat this subject as these three cases have presented it to me, dealing in some detail with the diagnosis and treatment of them.

Full term extra-uterine pregnancy has for a long time been of deep interest to me as I realize a diagnosis usually is not made until the last minute and the treatment always is a serious one. One finds in going through the literature, some authors claim that the diagnosis is simple, while others say that it is rarely made until the patient goes to the operating room. I personally consider this condition one of the most difficult to diagnose accurately that one encounters in the practice of obstetrics and gynecology, and in spite of my careful teaching

two of these cases passed me undiagnosed until time of operation. In one case a definite diagnosis was made under ether anesthesia after the patient had had false pains simulating uterine contractions for six days and finally passed a decidual cast, when my suspicion was aroused. One other entered the hospital in eclampsia and the abnormal location of the fetus was not discovered for several hours after admission, but in attempting to empty the uterus for the eclamptic condition I found the empty uterus enlarged and in the culdesac and the fetus free in the abdominal cavity. The third case was diagnosed by me as intraligamentary cyst, was sent to the operating room and the abdomen opened before I realized the condition to be one of full term extra-uterine pregnancy. Each of these diagnoses I have gone into carefully in the case reports herein contained, and would urge your most careful consideration so that you may profit by my failures. Two of these cases were operated on by my chief, Dr. Henry Schwarz, professor of obstetrics and gynecology, Washington University Medical School, I assisting him in both operations and to him I am indebted for the privilege of reporting them. The third case came under my observation in private practice and was operated on by myself.

*Classification.*—Abdominal pregnancy or full term extra-uterine pregnancy may be classified as primary and secondary. The claim is made by most authors that the primary form is very rare and that if a complete investigation of the case is made it always proves the location of the placental attachment to be of secondary type. There are a few, however, who claim that primary abdominal pregnancy does occur and very few authentic cases have been reported but what could be classified as secondary as far as the evidence presented would indicate.

Kleinwachter upholds the theory of primary abdominal pregnancy and in his most interesting monograph cites the various theories of its possible causation, from which I will quote, while many others, including J. Whittredge Williams, claim that the primary form is exceedingly rare

\* Read at the Sixty-Third Annual Meeting of the Missouri State Medical Association, Jefferson City, April 6-8, 1920.

and that practically all cases are secondary and that the classification can only be made by a very careful histological study of the adnexae. Theoretically, primary abdominal pregnancy is very plausible and no doubt does sometimes occur, but in the majority of cases the fertilized ovum was not originally implanted on any abdominal organ. Unfortunately, in the three cases herein described I was unable to make a classification owing to the exsanguinated condition of the patients but assumed them all to have been of secondary type. I am quite sure that many authors have experienced the same condition, as these operations are so serious and so little time is available that for the good of the patient a careful inspection of the adnexae cannot be made, hence the failure of classification.

*Causes.*—Kleinwachter's explanation of its occurrence is as follows:

1. The ovisac may rupture so far from the ampulla that the current caused by the movement of the cilia cannot carry the ovule into the tube.
2. The end of the tube may be completely closed in consequence of former inflammation and the ovule be impregnated by semen coming through the other tube.
3. The tubal orifice may be so narrow that while permitting spermatozoa to pass the ovule enlarged by impregnation cannot pass.
4. The tube may have lost its cilia from disease and the current fail so that the ovule is not carried to the tube.
5. A temporary abnormal position or movement of the abdominal organs may obstruct the passage of the tube.
6. Old exudates or pseudomembranes may either obstruct the orifice of the tube or be in the way of the ovule reaching the orifice.
7. Abdominal pregnancy may occur when both tubes are normal. The ovule impregnated in one tube may pass out into the abdominal cavity and then cross to the other tube, but the latter will not admit it because meantime the ovum has become too large.

This last theory is certainly a most ingenious one. We all know that pregnancy does occur when a tube on one side and an ovary on the opposite side have been removed. In such an instance the ovule has to pass from one side to the other to gain admission into the tube and if for any reason something should delay this passage and hinder its entrance into the tube we might possibly have a primary abdominal pregnancy. It is true when we consider the causes of secondary abdominal pregnancy, we must admit it is the most feasible, thus:

1. Rupture of the tube with expulsion of product of conception into the abdominal cavity.
2. Extrusion through fimbriated extremity of tube of product of conception.
3. Rupture of uterus with escape of ovum.

*Diagnosis.*—This is a most difficult thing and one has to exercise all of his good senses and judgment to arrive at an accurate diagnosis. If

these cases could be seen early by the obstetrician and gynecologist, say in the first six to eight weeks, then a diagnosis of extra-uterine pregnancy might be made out, the abdomen opened and the immediate condition removed and thus avoiding these conditions going on to full term with its very high mortality to both mother and fetus. We are taught in obstetrics to examine our patients as early after cessation of menses as she will present herself and a woman of intelligence will apply to the obstetrician as soon as she has missed her first period or two. Our duty is to determine two things at this time: 1. Is she pregnant? 2. If so, is the ovum inside the uterus? However, most of the cases reported have come under the care of the general practitioner and no attempt at objective diagnosis was made. The patients were told they were pregnant and when in labor to notify the doctor. At term, after a siege of false labor for several days, the physician discovers something is wrong and the obstetrician and gynecologist is called and if he is not very careful he himself will be unable to make a definite diagnosis. If the fetus is still alive the diagnosis is fairly easy, but if the fetus has been dead for at least four weeks a diagnosis of abdominal pregnancy is rarely made but usually one of "fibroids," "ovarian cyst" or "pelvic abscess." I will attempt to outline a chain of findings which, if adhered to closely, will help determine a definite diagnosis:

- (a) Always pay strict attention to the patient's history. Most patients know when they are pregnant and this you must not entirely disregard.
- (b) The normal signs and symptoms of pregnancy.
- (c) There are no intermittent uterine contractions to be felt.
- (d) Inability to palpate the round ligaments.
- (e) The fetus seems directly under the skin and the heart beat is very close to the ear.
- (f) Sensitive, rigid abdomen and irregular in outline.
- (g) In a small percentage of cases a decidual cast is expelled from the uterus after a period of pains.
- (h) Presenting part usually not in pelvis. Most cases uterus is large and in culdesac. Placental attachment between bladder and uterus obstructing pelvic inlet.
- (i) Vaginal examination usually reveals a closed cervix long and soft and does not admit tip of finger. Fundus is retroverted, large and fixed in culdesac.
- (j) Introduction of sound into uterus.
- (k) Roentgen ray, especially important in case of dead fetus for some time. Your palpation findings in this condition are usually negative.



*Treatment.*—The treatment depends on two factors: 1. Operation pertaining to mother and fetus. 2. Problem of handling the placenta.

Ley<sup>1</sup> reports a statistical study of 100 cases of full term abdominal pregnancies and cites many interesting features.

Living fetuses twenty-two cases with a maternal mortality of 27 per cent. Fetal mortality 18 per cent.

Dead fetuses less than eight weeks, thirty cases with a maternal mortality of 20 per cent.

Dead fetuses beyond eight weeks, forty-six cases with a maternal mortality of 4.25 per cent.

The removal of the fetus is a simple procedure and the mother's experience is none the worse, but when we come to deal with the removal of the placenta we encounter a most grave problem. Four methods for such removal have been described:

1. Removal of the whole placenta and sac.
2. Removal of the placenta and marsupialization of sac, packed with gauze or drained.
3. Leaving of placenta in situ, marsupialization of sac and packed with gauze or drained.
4. Sewing up of sac over placenta and closing abdomen without drainage.

All these methods have been repeatedly used and no one method can be relied on too strongly as one has to be governed according to the structures involved in the placental implantation.

One cannot be too careful in his judgment which method to choose. If the placenta is located in the pelvic region, its usual site being between bladder and uterus involving either broad ligament, it is certainly better to hurriedly remove the placenta, leaving the sac behind, marsupializing and packing with gauze. This is a rapid procedure and hemorrhage is easily controlled. If the placenta is attached to the under surface of the liver, mesentery, omentum or mass of intestines, which sometimes though rarely happens, it seems better to close the sac over the placenta and close abdomen tightly, or else leave sac open, marsupialize and pack or drain. The former method has been performed in a few cases with very low mortality, while the latter shows a higher mortality and is falling into disuse. When the fetus is dead it is always best to wait at least six to eight weeks after death of fetus, provided the condition of mother shows no contraindications, at the end of which time the placenta is completely encapsulated and all sources of hemorrhage reduced to a minimum. The placenta then can be shelled out from its attachment and drainage instituted. When we consider the high mortality of mother and fetus when operation is performed for living fetus at term and the low mortality of mother when fetus has been dead for sometime, we cannot help but think a bit before operating

when the fetus is alive. There are many things to consider and it seems to me one should weigh the problem very carefully before going ahead. We know also that about 20 per cent. of fetuses delivered in full term abdominal pregnancies show some form of deformity and this factor must be considered.

One might ask, if no operation was performed after the death of fetus what would become of it? The fetus first undergoes a process of maceration and if it does not cause a state of sepsis and death of patient, mummification or lithopaedon formation follows and patient carries such a condition around for several years.

F. N. Yeager<sup>2</sup> reports a necropsy in a woman 72 years old, in which a mummified full term fetus outside the uterus was found; there was no placenta found. A history was obtained of a missed labor thirty-five years before her death.

Sir William Lawrence, 1738, reported a case of a patient in whom a lower limb of a mature fetus contained in an osseous cyst, was removed from a patient who died in her eightieth year and obtained a history of missed labor fifty-two years previous, representing no doubt a lithopaedon resulting from an abdominal pregnancy.

H. R. Andrews, 1903, reported a case of lithopaedon impeding the growth of the pregnant uterus. On opening the abdomen a lithopaedon weighing 3 pounds, 5 ounces, was removed and a three and one-half months' extra-uterine pregnancy was discovered. He reports a second case in which he observed a full term extra-uterine pregnancy carried for ten years with no discomfort to patient until all of a sudden she passed some bones, chiefly ribs, per rectum. This she continued to do at intervals for a year and was admitted to a hospital with symptoms of intestinal obstruction. The abdomen was opened and remnants of a fetus forming a large tumor was found. No attempt was made at removal. She later developed pyemia and died, but before death passed several more bones per rectum.

I mention these few cases from the literature in order that we may appreciate the seriousness of this most interesting subject and be able to handle these cases in a more systematic and intelligent manner.

Below I report three cases:

CASE 1.—No. 510, Mrs. J. C., gravid ii, examined at Washington University dispensary, Aug. 7, 1911. Previous pregnancies, one premature labor 18 months ago, stillborn at 7 months.

Menses: Onset at 14 years, always regular, with no disturbance; last menses Jan. 8, 1911, as usual.

Present Pregnancy: Normal signs and symptoms. No pain in abdomen, no bleeding from vaginal tract.

Examination: Abdomen ovoid, fundus four fingers below xiphoid, presentation, vertex; position, left occipito-anterior, presenting part not engaged. Vaginal

1. Ley: Proceedings of the Royal Society of Medicine (Aug.) 1919.

2. Yeager, F. N.: J. A. M. A. (Aug. 10) 1912.

outlet and perineum, firm and good condition. Cervix long, closed; direction, vaginal canal. Diagnosis at this time was said to be of normal pregnancy. Oct. 4, 1911, patient had an eclamptic convulsion which lasted 5 minutes. Our O. P. D. was called and a student responded and sent patient to hospital and she had six more such convulsions in rapid succession.

Vaginal Examination: Cervix partly open and a decidual cast protruding from canal. Fundus retroverted in culdesac, size of fist and fetus high in abdomen; vertex presenting but not in pelvis. A diagnosis was established by Dr. Henry Schwarz and an immediate operation performed.

Operation.—Abdomen was opened in midline from just above umbilicus to symphysis. Just under the peritoneum and somewhat closely adherent to it was found the fetal sac, dark bluish in appearance; amniotic sac opened, fluid highly mixed with meconium present; child seized by leg and extracted; badly asphyxiated but responded to resuscitation. On investigating the site of attachment of the cord it separated from the placenta with great ease. On exploration of the surroundings of the fetal sac a considerable mass of adhesions were found, particularly joining the omentum. On the left side of sac was found what was thought to be the round ligament on the top border of the broad ligament extending from the sac wall to the side of the pelvis. This was clamped and cut through close to the sac. The fundus of the uterus was apparently buried in the mass of the placenta, which seemed to be located largely on the left side of the uterus and posterior to the broad ligament. The tubes and ovaries were not isolated or identified on either side. Some attempt was made to free the omentum by tying it off with catgut and cutting through close to the sac wall, but loosening of the sac was not persisted in. The placenta was partly torn loose and removed, but considerable placental tissue was left in situ. The bladder injury was then repaired and the margins of the amniotic sac were sutured to cut margins of the peritoneal opening in the abdominal wall. The empty sac was then packed with gauze and abdomen closed. Patient returned to ward in deep shock, for which she was treated accordingly.

Drainage was very free for the first few days; on the third day some packing was removed; on the fourth, fifth and sixth days like amount removed and new light packing applied. Patient had no more convulsions and ran a fair postoperative course and was discharged from the hospital November 26, one month after operation; wound completely healed. Baby weighed 2,800 grams, female, and lived only 10 hours; autopsy showed bronchopneumonia.

CASE 2.—No. 695, Mrs. S. C., gravid 1. Not seen by O. P. D. until onset of labor.

Menses: Onset at 11 years, regular every 28 days, single day duration. Present pregnancy, normal signs and symptoms. No pain or discomfort in abdomen; no bleeding from the vaginal tract; last menses Jan. 1, 1912.

Sept. 4, 1912, O. P. D. called and student responded. This was the first time the patient was seen by our service. Examination revealed dome abdomen, fundus mid umbilicus and xiphoid, breech presenting, floating, heart beat in upper left quadrant 140 per minute. Patient complained of pain in abdomen intermittent in character, occurring every 20 minutes. Student remained on case for 24 hours and gave three vaginal examinations and reported each time cervix long and closed, presenting part not engaged in pelvis and pains very weak, no definite uterine contractions could be made out as abdomen was very rigid and tender. Twelve hours later pains ceased and patient went to sleep and student returned to hospital. Three days later patient had irregular pains and expelled a decidual cast from uterus. She was immediately brought

to hospital and ether examination revealed the following:

Abdomen round in appearance, some fullness over bladder region, an irregular body felt over abdomen extending from symphysis to above umbilicus, probably a distended bladder. Round ligaments of uterus could not be palpated. Small masses representing fetal small parts which move actively on stimulation felt especially to left of umbilicus in left flank; upper end of fetus extends underneath costal margins and cannot be outlined. Impression on palpation of fetus is that it is not within uterus.

Vaginal Examination: Vaginal walls smooth, cervical canal located with difficulty as vaginal portion cervix behind blends with rest of vaginal wall. Beneath promontory in hollow of sacrum is an irregular soft mass which is connected with cervix and suggests a retroverted uterus. Diagnosis, full term abdominal pregnancy.

Oct. 10, 1912, operation by Dr. Henry Schwarz, I being assistant. On opening peritoneal cavity many adhesions were found to all surrounding tissues. An attempt was made to suture sac to peritoneal incision before opening, but the introduction of the first needle passed through the placenta and bleeding was profuse. The sac was opened and a living fetus was delivered. The placenta was implanted low in pelvis between bladder and uterus and extended 7 cm. above symphysis. (This was what was thought to be distended bladder before operation.) Placenta was hurriedly torn away in two pieces, leaving sac behind; bleeding from site very profuse and patient's condition reported by anesthetist as being very bad; three large abdominal packs placed against bleeding area and abdomen closed. Patient returned to ward pulseless and in deep shock and was treated accordingly with response. Drainage was very heavy, but after sixth day all sponges had been removed and a lighter pack applied and changed daily until wound was completely closed. Patient left hospital twenty-five days after operation in good condition and wound had completely healed.

Baby weighed 2,200 grams, female, and when discharged from hospital weighed 2,320 grams and was nursing mother.

CASE 3.—Mrs. H. R., aged 36. Gravid iii, referred with diagnosis of dead fetus in uterus.

Menses: Onset at 15 years, always scanty and regular. Last menses, March 25, 1919, scanty as usual. Previous pregnancies, one child dead at two months thirteen years ago from bronchopneumonia, one living child 12 years of age; both puerperiums uncomplicated. Patient had no menses in April, May, and in June a slight vaginal bloody discharge, but no abdominal pain. Fetal life was felt in September, but there was always some abdominal discomfort and the greater part of October and November she was unable to do her housework. There was a rapid loss of weight and no appetite. Nov. 27, 1919, fetal life ceased and there was a rapid decline in the size of her abdomen, soon followed by a serosanguinous discharge from the vaginal tract of very fetid odor. Her physician made a diagnosis of dead fetus, but thought it was in uterus. She was kept under observation by him for two months, when she seemed to be becoming septic and rapidly failing in health. She entered the hospital Jan. 8, 1920.

On admission to hospital, patient had a very septic appearance, temperature 101, fast pulse and a very sick woman in general. Abdomen was small, slightly ovoid below the umbilicus, smooth and regular in outline, very rigid and tender. A mass was palpable which extended as high as the umbilicus and firmly attached to pelvis.

Pelvic Examination: Cervix was closed, small, soft and direction of vaginal canal. Fundus could not be outlined, but pelvic inlet was filled with a mass size of a watermelon, fixed, smooth and very tender. No definite diagnosis could be made at this time. Next



morning an ether examination was given and uterus was found to be about the size of fist and retroverted in culdesac, firmly fixed and anterior to uterus, but not connected with it could be made out a large smooth mass, semisolid and filling whole of pelvic inlet. A diagnosis was made of either intraligamentary cyst or fibroid.

Jan. 13, 1920, I opened abdomen and found a mass extending just above umbilicus with adhesions to all surrounding structures. Great difficulty was experienced in freeing mass of its attachments. After removing mass I opened it and found it to be a completely encapsulated placenta that was undergoing degeneration. I ran my hand in upper abdomen and found a badly macerated fetus, transverse under liver and behind the stomach and large intestine. Bleeding was very profuse from the placental site. Packing and drainage instituted and abdomen hurriedly closed.

I wish to state that I completely disregarded the patient's history in this case, likewise what her physician told me about her, as her findings at time of my examination were not suggestive of pregnancy, but rather fibroid or ovarian cyst. I did not know what the true condition was until I had removed the mass and opened it. The patient left the hospital in one month in good condition. The fetus was macerated and weighed 2,350 grams, and had been dead about eight weeks at time of operation.

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#### MALIGNANT TUMORS IN CHILDHOOD\*

MALVERN B. CLOPTON, M.D.  
ST. LOUIS

Malignant tumors in children are far from rare and present certain features that may be reviewed with interest. Sarcoma is the type of growth almost always encountered in children, just as epithelial cancer is the common type in old age. Sarcoma in children often follows a much more rapid course than in adult life, and the most malignant growths are those that appear earliest in life, some of these possibly being congenital. The appearance of these growths so shortly after birth gave the opportunity for the development of the well known theory of all new growths, as it was while studying a renal growth in a child of 20 months that Cohnheim formulated his theory of the origin of tumors from misplaced embryonal rests. He found tumors in both kidneys made up of striated muscular fibers and recalled that the primitive kidney is found in intimate contact with the protovertebrae from which a large amount of musculature is formed; which suggested that embryonal muscle cells had mixed with the primitive kidney and that the sarcomatous nodules came from the proliferation of the connective intermuscular tissue.

The diagnosis of malignant growths in children is attended by certain difficulties due to the frequent lack of the classical symptoms seen in adults. The appearance of an unusual swelling

in the child is the sign that first draws our attention. We may find no clear cut, leading symptoms, such as hematemia, pain in the eye, soreness or pain in the bone, intestinal disturbance, or pain in abdominal growths. Often there is no change from the normal good nourishment of the child until metastasis takes place, when the downward course is most rapid. Febrile reaction may mislead into thinking that the mass is due to an infection.

No part of the body is exempt from these new growths in childhood, but certain organs seem most prone to involvement, such as the kidney, eye, brain, testicle, and bone, and in discussing the involvement of these organs I shall refer to notes on cases that have come under our care at the St. Louis Children's Hospital.

*Kidney Tumors.*—It is generally considered that in childhood the kidney is more often the seat of sarcoma than any other organ. Kely-nack studied 160 cases of renal tumors, 52 per cent. occurring under 10 years of age. The growth may appear very early. In fact, this is especially a disease of early life, and it may attain enormous size. The growths may be symptomless, the urinary signs rarely being indicative of the trouble. The swelling of the abdomen may first attract attention and when the child is seen by the physician it may have advanced into a grave state of cachexia. There is a tendency to bilateral involvement. Fever may accompany the rapid growing tumors, as in one of our cases, and an abscess be suspected. Untreated cases usually progress to an early termination, rarely living more than a year after the tumor appears. Operation offers little success and the child may die after a simple exploration as in two of our cases.

CASE 12,687.—Aged 1½ years. The child was admitted for a mass in the abdomen which had been noted for three weeks and had increased in size since it was first noticed. The child had given no indication of being ill; she had been up playing as usual, appetite good, no vomiting, no diarrhea, stools normal. There was some loss of weight. Urination was frequent until the past two days when she had voided only three or four times a day and urination had been painful.

Well developed child. Abdomen much distended and rigid with many dilated veins. A large mass occupies the right side of the abdomen, extending from upper quadrant downward and backward; not painful. Liver dullness continuous with mass. Various diagnoses were given—congenital cystic kidney cyst of liver, neuroblastoma, syphilis of liver. Urine examination negative. Wassermann negative. Blood urea, and NPN within normal limits. Exploration showed a large kidney studded with occasional cysts that contained brownish red grumous material. The child's condition became critical on the operating table and she was returned to the ward where she died in a few hours. At necropsy a large round sarcoma was found inside a shell of kidney which occupied the whole right side of the abdomen with ascites and tumor implantations on abdominal wall and diaphragm.

\* Read before the Sixty-Third Annual Meeting of the Missouri State Medical Association, Jefferson City, April 6-8, 1920.

Another case which was just as rapid in growth, was very sick when admitted, had a high fever and symptoms of an acute infection. The growth was mistaken for an abscess, although a new growth of the kidney had been considered.

CASE 9,003.—Aged 19 months, was admitted to the hospital because of a high fever, jaundice and vomiting. For the past three weeks the skin had become yellow and there had been an irregular fever, the child being cross and irritable when temperature was high. The abdomen was distended, liver dulness coming below the costal margin. A resistance was felt in the region of spleen but no mass. On the right side a mass was made out in the upper and back part of the abdomen below the costal margin. There was a right sided hydrothorax. Leukocyte count, 28,600. The urine showed some granular epithelium but was otherwise normal. The mass in the right loin was considered to be a perirenal abscess, although the possibility of tumor was mentioned. An incision through the muscles came down on an encapsulated mass of dark red color. When opened this mass was very cellular and honey-combed with small soft areas which suggested coddled white of egg, slightly blood tinged. There was no hemorrhage and no pus. Patient's condition grew steadily worse and he died twenty-four hours later. The tissue removed proved to be small round celled sarcoma originating in the kidney.

There were three other cases of abdominal tumors undiagnosed by operation or necropsy which were probably sarcoma of the kidney. Two occurred in children of 7 years, the other in an infant of 7 months. Two of these cases were showing a rapid decline while the other had gone over a year since the mass was first noted. One was bilateral.

Hydronephrosis in children is seen quite often and the tumor formed by the distended pelvis can easily be mistaken for a new growth. The intermittent emptying of the pelvis and dilated ureter may give periods of comfort, but when the occlusion lasts for a length of time there may be grave symptoms of intoxication and infection that will mislead in the diagnosis. A pyelogram, or even a catheterization of the ureters in children, gives the most valuable information, but it is attended with certain discomforts and risks that have to be borne in mind.

Adenocarcinoma of the kidney occurs in rare instances in infants.

*Eye Tumors.*—Two types of growths appear in the eye in childhood: sarcoma, generally pigmented, springing from the iris or choroid, and glioma of the retina, the latter growth differing from the glioma of brain, in that it forms metastasis and tends to invade the contiguous tissues. Retinal glioma occurs, according to Haab, only in children and shows an extreme degree of malignancy. In children the diagnosis of this condition is often difficult, as the visual trouble and the glaucomatous period pass unnoticed and it is only when the new growth has proliferated into the vitreous that it is

possible to make the diagnosis. In these cases when the retina is separated we see through the dilated pupil a whitish iridescence like in a cat's eye and the ophthalmoscope reveals the growth. About a fifth of these cases can be cured if taken early, before the globe is perforated or the extension has taken place through the vessels or along the optic nerve. When the growth is generalized the preauricular glands and parotid are invaded, secondary tumors show at the base of the skull and the bones of the limb and different viscera are reached. One of the two cases of orbital growths in our series was a melanotic sarcoma of iris in a boy 3 years old, which had been noticed for over two years, which recurred in the optic nerve three months after enucleation. The other case was a rare growth of a glioma in the optic nerve in a girl of 3 years. The growth had evidently begun at 8 months of age when exophthalmos was first noticed. On admission the eye was pushed forward by a mass to the lower and outer side of the orbit, the eye in a position of marked convergent squint. The media was clear, disc somewhat atrophied. The tumor was thought to arise from the cellular tissue of the orbit, the bony cavity having been markedly enlarged by the growth. The growth was removed through an incision along the lower brim of the orbit. It was found to be encapsulated and proved to be a glioma of the orbital nerve. The eye was not removed. A fat transplant was put into the space left after removal of the tumor to overcome the tendency of the globe to drop back. Later on ocular movements were quite good, as the musculature had not been disturbed.

*Brain Tumors.*—Another class of cases are those with tumors arising in the central nervous system. Twenty-two cases have been admitted with the diagnosis of tumor of the brain. The youngest was 3 years, the oldest 14, averaging eight years. This large number compared with other cases of tumor is probably due to the fact that Dr. Sachs has attracted this group by his work in this special field. One pituitary and several cerebellopontine tumors are in the group, but most of the proved cases, including one child well several months after removal, were gliomata. In a recent review of his experience, Dr. Sachs found the greater mortality was in gliomata; in sixty-four tumor cases other than gliomata the mortality was 17 per cent. He draws attention to the fact that gliomata differ from other tumors in that they are fast growing, soft of consistency and not encapsulated, and they grow either by replacing brain or by displacing it. The deformity is greater the more rapid the growth and tumors removed from a deformed brain are followed by marked edema, so that there is a great advantage in the several stage operation, first decompressing and removing fluid from the ven-



tricles and later removal of tumor as a last step. He also believes that 26 per cent. of gliomata are removable, though he only removed 14 per cent. He does not consider glioma malignant because they do not metastasize, but they must be gotten early to cure them before the brain has been damaged by distortion. The only cases he has saved were those in whom symptoms had existed for less than four months.

*Spinal Tumors.*—Different prognoses attach to spinal tumors, depending on the location; as intramedullary, intradural, extradural or vertebral. Although relatively less frequent than brain tumors, spinal tumors of all kinds are found in children of all ages. Schlesinger found tuberculoma the most common of intramedullary growths in children under 10. Frazier's tables show sarcoma as the most frequent of spinal tumors in children. The first case I want to report is an extradural growth which developed with practically no neuralgic pains, because of the resistance of roots to the soft sarcoma, and compression of the cord came abruptly without warning signs. The only symptom the child complained of was pain in her back, for which she insisted on remaining in a sitting posture as lying on her back intensified her suffering. This, and the fact that there was no kyphos, made us think it was not tuberculousis.

CASE 14,775.—Aged 10 years, admitted Nov. 1, 1919, with a history of pain in the back for three weeks. Her back had gradually become more flexed. There was a rounded curve forward from the sacrum to the upper dorsal region which could not be straightened out but could be more flexed without discomfort. The child could not lie down on account of pain and remained in a sitting position. Cervical glands enlarged. Chest negative. Positive complement fixation test for tuberculousis. Von Pirquet negative. Reflexes normal. Temperature and pulse normal. Leukocytes, 10,200. The diagnosis was undetermined; the pediatricists were inclined to consider it early Pott's but the orthopedists, after considering the sudden onset, the general rounded position of the spine, the fact that the patient was more comfortable sitting up, the absence of a definite kyphos, the absence of roentgen-ray findings, with a psoas irritation without signs of abscess, were rather opposed to the diagnosis of Pott's disease and thought the condition suggested the possibility of retroperitoneal glands, infectious arthritis or possibly some growth in the cord. The Wassermann was negative and spinal puncture showed a clear field with six cells to centimeter. Eleven days after admission a flaccid paralysis developed in both legs, anesthesia was complete from the level of the iliac crest downward, while above this there was a band of hyperesthesia. The transverse lesion was located at the level of the eighth dorsal segment. Operation Nov. 15, 1919, disclosed an extradural tumor which began under the seventh dorsal vertebra, and extended downward to the tenth. Part of this was removed and the cord pulsed freely. The child's condition remained unchanged for a time after operation and then she began to go down rapidly and died two months after operation from what was considered a general sarcomatosis although no necropsy was permitted. Section from the growth showed a small round celled sarcoma.

A second case of spinal tumor originated in the vertebrae. The child was treated for a long time under a mistaken idea that he had Pott's disease, even having an Albee transplant. He lived for almost three years after the appearance of the first symptoms. The case is recounted to emphasize the difficulty in coming to a correct diagnosis. Judson has reported three cases in which the same error of diagnosis was made.

CASE 9,028.—Aged 9 years, was admitted Sept. 18, 1915, because of a lump in his back and trouble with the right leg. There was a congenital dislocation of the right hip noticed when the child was 5 days old; although it was treated it was not reduced and he grew up with a marked stoop and he walked with his hand on the right knee. A few months before admission the mother noticed a lump over the lower part of the spine which had not increased much in size. The back showed a marked kyphos in the mid-lumbar region and a scoliosis to the right in the thoracic region. No tenderness along the spine. There was a marked flexion of the right hip due to the dislocation. A roentgen ray showed destruction of the bodies of the third and fourth lumbar vertebrae. Intradermal 1:5,000 tuberculin slightly positive, but deep injection of 1 and 3 mg. of tuberculin was negative. A diagnosis of Pott's disease was made and a cast applied. Four months later (Dec. 22, 1915) an Albee spinal fixation graft was made, including from the eleventh dorsal to the fourth lumbar spinous processes in the graft. The healing was perfect and for a year the child seemed to improve. It then began to go down hill. A soft bulging mass appeared over the kyphos; this was incised exposing a friable tumor that had eroded the bones of the spine. Microscopically it was a spindle celled sarcoma. One month before death root pains came on and shortly after a paraplegia developed.

The child died two and one-half years after the first appearance of the lump on the back.

Necropsy 962. The tumor involved the lower lumbar vertebrae and upper part of the sacrum and the growth completely encircled the dura of the cauda equina. The vena cava from the renal veins to the bifurcation was irregularly distended with gray, translucent, soft tissue, metastasis to lungs, liver and mesenteric lymph nodes.

*Testicle Tumors.*—Sarcoma or mixed cell growths of the testicle arise in children with no great frequency. In our series we have not encountered a testicular growth but the literature records a few instances. In Bulkley's study of fifty-nine cases of malignant growth in retained testicles the youngest case was 17 years, and Kober found that 71 per cent. occurred between the ages of 20 and 30. In Coley's series of sixty-four cases no case is recorded younger than 20. In the statistics of 182,729 male admissions to general hospitals, there were 116 cases of sarcoma of the testicle, of which twelve occurred in undescended testicles, only three in intra-abdominal testicles. Corner has put the explanation very aptly: "It is not the *position* of imperfect descent, but the *condition* of imperfect development associated with it which leads to the incidence of malignant disease." I have found four cases of testicle tumors in children in a cursory examination of the litera-

ture. One in an infant 20 months old, a smooth egg-like growth, which was a mixed tumor; a seminoma in a 7 year old child; a sarcoma in an 11 year old boy; and a carcinoma in a 15 year old child.

*Vaginal Sarcoma.*—Generally these growths look like innocent polyps at first, but they recur soon after removal and are followed by cystitis and pyelonephritis, general sepsis and death. Even extirpation of the whole genital tract has been performed in six cases without success. Radium treatment in one instance improved conditions, as embryonal tumors are particularly susceptible and the growths are accessible, but it was followed by great bladder irritability and had to be discontinued. About fifty cases have been reported and only one has remained free from recurrence after operation. They have been found in children up to the fifth year, most of them appearing before the fourth year. In this number only one was congenital, although they are considered to arise from the papilla so numerous in the vaginal wall during the fifth intra-uterine month. A polypoid growth with a number of grape-like cysts is first noticed protruding from the vulva. These masses are usually round or ovoid, smooth, semitransparent and give the appearance of cysts. The color varies from a greenish white or yellow to pink or hemorrhagic tinted masses. The clinical course is usually very rapid and while the growths do not metastasize they return locally very early.

CASE 3,503.—Aged 5 years, admitted Oct. 24, 1912, complaining of pain in the lower abdomen and no control over her urine. One month before trouble with bladder had started, a mass was seen in the outlet from the vagina. There was a reddened cauliflower mass protruding from vulva. The vagina was filled with similar masses and a purulent bloody discharge came from vagina. The attachments of polyps were mostly to the posterior wall. The depth of the vagina was greatly increased and it contained about half a pint of tumor. The uppermost polyps looked like chicken fat, yellow and almost transparent. After removing many of the growths the vaginal wall contracted. It was freed below and dissection had been carried almost to the cervix when the operation had to be abandoned because of the critical condition of the child. Later the operation was completed by removing all of the vaginal wall up to the neck of the uterus. The child lived for a year and died with an enormous sarcoma of the pelvis involving the vagina and uterus and by pressure it had obstructed the urethra resulting in a hypertrophy and dilatation of the bladder and ureters, and an infected hydro-nephrosis of the kidney with multiple abscess of kidney.

*Ovarian Tumors.*—There are reported in the literature cases of carcinoma and sarcoma of the ovaries. Smith and Mortley have recently reviewed these cases and find eight carcinomas and seventeen sarcomas of the ovaries in children under 16 years. Two carcinomata and three sarcomata were bilateral. Operation was followed by recoveries in several of these cases.

Relatively, there are many more teratomas or dermoids of the ovary in children than malignant growths, but malignant changes are often found in the cystic tumors and the early removal of any sort of abdominal growth is advised. I will instance a case of dermoid of the ovary as it shows some points in diagnosis that are of value in determining the origin of the abdominal mass.

CASE 15,256.—Aged 9 years, admitted March 7, 1920, because of a mass in the abdomen which her mother had noticed for six months. There was no complaint whatever; child's general condition was excellent. No renal or bladder trouble, no vomiting, constipation of an easily controlled nature. The mass was cystic, reached from the pubes well above the umbilicus, was movable laterally and could be partly dislocated into the upper right quadrant. A roentgen-ray examination by Dr. Mills showed the stomach and small intestines lying to the upper left side of the mass. The cecum was relatively high. The attachment of the cyst must therefore be low down in the pelvis and the most likely origin was from the ovary. A kidney origin was unlikely, because the cecum would have been dislocated downward. A mesenteric cyst was unlikely because of the arrangement of the small bowels in relation to the growth. Operation showed the growth to be a dermoid arising from the left ovary. The cyst when opened showed hair and bone and skin. Child's recovery was uneventful.

*Intestinal Tumors.*—The rarity of carcinoma of the small intestine is worthy of consideration. In children it practically is never found. Sarcoma usually occurs in the small intestine and the clinical feature that distinguishes it from carcinoma is its occurrence in the early years of life. It is noteworthy that sarcoma attacks those regions of the stomach and intestine that are usually respected by carcinoma. It arises chiefly from the submucous layer and produces ordinarily a solid or cystic growth lying outside of the intact mucous membrane. The growth may be polypoid and afford the start of an intussusception, or be constricting, or, as in our case, distend the canal. It usually forms much larger tumors than carcinoma and, as in the reported case, may be mistaken for a renal growth because of its position and lack of intestinal symptoms. The result of operative treatment is unfavorable. Metastasis occurs to the lymph glands and to the liver.

CASE 6,118.—Aged 5 years, admitted Nov. 26, 1913. Child was feeling well on admission and was brought to the hospital because the mother noticed a lump in the right side of the abdomen which she had first found when bathing the boy, but it had not grown and had not given any bother. There had been no trouble with the bowels or urine and the appetite had been good. No loss of weight. The child was pale but the nourishment was good. There were enlarged lymph nodes in the neck and groin. The abdomen was protuberant, more so on the right. Palpation discloses a tumor on the right side beginning just below the costal margin, filling the right side and flank, just below and between umbilicus, extending across the midline about an inch. Tumor is firm,



feels slightly nodular, and at the umbilicus shows a notch. There is dullness over the entire mass with an area of resonance between it and the liver. The mass is freely movable, swinging as a pendulum into the left upper quadrant with the attachment in the epigastrium. When first seen mass was 20 cm. long by 12 cm. broad. Six weeks later it was 30 cm. long and ascites began to develop. He died two months after admission with a bronchopneumonia following measles. At no time had there been intestinal symptoms. The urinary findings and blood picture were normal. Operation was not attempted because of the size of the malignant growth and presence of enlarged glands. Roentgen-ray therapy was given for a time. No diagnosis was made as to the seat of the growth, although the kidney was considered the most probable.

At necropsy (No. 257) the tumor was found to be an aneurysmal dilatation of the small intestine the upper end about 12 cm. from duodenal jejunal junction extending downward over 20 cm. The internal diameter of the tube about 10 cm. The wall of the tumor varying from 9 mm. to 2 cm. The inside appeared white and rough, with here and there areas of necrosis. At one point there was a small perforation. Metastases were noted in the adjacent mesenteric glands and in the peritoneum, small tumor masses being found in the hernial sacs. Microscopically, the tumor was made up of round and oval cells in the meshes of delicate fibrous tissue, and was thought to arise in the submucosa.

One other case was admitted which had been operated on elsewhere and the parents were told that the child had a sarcoma of the intestines. Nothing could be done for this child and it left the hospital without treatment.

*Bone Tumors.*—Sarcoma of the long bones occurs rather infrequently in childhood. Cole reports fifteen cases in children in his experience with seventy-one cases of all ages, and states as far as he knows his series is the only one that reports long bone sarcoma in children under 10 years. Of these he gives six cases, four of them in the femur. In his series half of the cases were in the femur, and next in frequency and making up the greatest number of the balance were the humerus and tibia.

Of all neoplasms the most malignant are those connected with bone. Often trauma plays an important part in their origin, and while there is no question as to their malignant nature, there is a complex relation between normal bone growth and a physiologic regeneration in connection with inflammatory processes. The periosteal growths are generally considered the most malignant. Of these the most common are the spindle cell growths, which form large tumors and usually leave the shaft intact. Much the most malignant of periosteal growths are the soft growths histologically small round celled. At the other end of the scale from these growths are the benign giant celled myelogenous sarcomata, which grow slowly and gradually expand the bone, periosteal new bone being occasionally thrown out, or at times leaving only a very thin paper-like shell of bone. This last variety as emphasized by Bloodgood can be

cured by the conservative operation of curetting or resection, while the other types of periosteal osteogenetic, or telangiectatic central growths show a marked tendency to recur either locally or by metastasis even after the most radical operation.

We have seen one rapid growing sarcoma beginning in the thigh of an infant of 12 months (Vuvich). This had been incised before admission under the impression that it was an abscess. Another case was in a boy 12 years (Schmitz, No. 10,698) with a small round celled sarcoma of the upper end of the tibia. This child did well after amputation for a short period then showed signs of metastasis in the lung. There had been a localized swelling near the knee which was rather soft without heat, redness or tenderness. The roentgen ray showed a slight rarefaction of the bone which did not look like syphilis or osteomyelitis and was thought by the roentgenologist to be sarcoma. Usually the roentgen-ray diagnosis of periosteal new growths is unreliable because of the lack of anything characteristic. Central tumors, on the other hand, give skiagrams which point rather definitely to the nature of the growth. One periosteal small round celled sarcoma of the tibia left the hospital without further treatment because we advised amputation after making an exploratory incision for what we thought might be an early osteomyelitis. This case remained without treatment in the hands of another surgeon because the roentgen ray showed no bony change.

I have covered in this review the malignant growths that appear most commonly in childhood. Cancer of the liver has been reported on by Castle of Kansas City. Many other rare growths are accounted for in the literature. Nor have I laid stress on the treatment of these cases. Early operation offers the best chances, but I am more convinced than ever that Coley's toxin should be used in these cases with great thoroughness. I cannot agree that all giant celled growths need the toxins because these are benign and should be eradicated if possible, but all other growths, whether operative or not, should get the injections and have the benefit of roentgen ray in massive doses, or be treated with radium.

404 Humboldt Building.

## DISCUSSION

### DISCUSSION OF NEFF AND CLOPTON PAPERS

DR. EDWIN HENRY SCHORER, Kansas City: I have nothing special to add except to emphasize one thing, and that is the examination of the new-born. It is one of the most unfortunate things that several weeks after a child is taken home from the hospital we find it may have some heart lesion, perhaps a heart murmur, or something of that kind that has not been noted in the hospital; or again we may find a child after three or four months having some infectious

disease with a heart murmur and we can not tell whether the heart defect is acquired or congenital.

Another thing is the examination of the child in surroundings that are familiar. We very seldom see children at the office, preferring to see them at home under normal surroundings. This is especially important in cases of mental deficiency, cases of masturbation, pyloric stenosis, etc. We can do so much better if the child is under normal conditions at home and not worried by the examination. I have several times seen children with physicians who do not take care of children only, and these physicians get out of patience, whereupon the mother feels that the doctor is in no way in sympathy with her. I think one of the things that helps is, on coming in to see a child, to sit down, take out your pad and pencil and take the history. By sitting down and writing out the history as you get it from the mother you give the child a chance to become accustomed to you. Oftentimes the child has been forewarned that the doctor is coming, but if you pay no attention to the child at first you can do very much more with the child later on.

DR. ELLIS FISCHER, St. Louis: I would like to ask Dr. Clopton if the question of radium treatment for tumors in children has been considered. In my work I have not come across any sarcomata in young children; that is before the age of puberty. I would like to know the effect if it has been used. Theoretically, the effect should be good. There are interesting things about children in a surgical way, and I think all the light should be thrown on the surgery of infants that we can get. Dr. Clopton has had an unusual experience and his observations are very important. I was much interested in his report of the mortality in simple explorations. One thing I have observed is that plastic flaps do not live in children as well as in adults. Another thing is that children, in my limited experience, stand peritoneal exploration rather well.

DR. M. B. CLOPTON, St. Louis: The only thing I have found in the literature in regard to the use of radium in these growths has been one case in a child with a vaginal growth. The irritation of the bladder became so great that the radium treatment had to be discontinued.

As to the cause of the deaths after surgical exploration, I do not know. The children look well nourished, but some retrograde condition develops that we do not make out by examining the blood or the urine. We found in several of these cases that the children often die from the shock of a simple exploration.

#### CONCLUSIONS IN JUVENILE DEFORMING OSTEOCHONDRITIS (PERTHES' DISEASE)\*

C. B. FRANCISCO, M.D.  
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It is my purpose to discuss this condition in a general way, calling attention to the facts known about it, aiding if I can the general impressions that seem to be not quite clear to some of the profession.

In the first place, I would like to emphasize that this condition is not a disease and should not be thought of in terms of diseased joints. There are a good many that believe syphilis is

the etiologic factor in causing the condition and it is true that quite a percentage of the children that develop this condition have positive Wassermann and other signs of syphilis. However, it is a question as to whether or not the bone is directly affected. It would seem that the lowered general resistance of the child resulted in failure of the osseous system to properly ossify. It is understood of course that treatment should be instituted if the child has syphilis, but with the understanding that the bone condition will not be changed.

The pathology as known today is a failure of the cartilaginous tissue in the head and neck of the femur to harden sufficiently to be able to bear the body weight. Legg thinks this is due to an interference with the blood supply and a result of trauma. The effect is simply a flattening out of the head and settling down of the neck. In other words, purely a mechanical function and a process exactly similar to that which occurs in the adolescence type of lateral curvature. The mechanism of course is different for in juvenile osteochondritis the bone has never ossified, while in the adolescence osteochondritis the softening is produced by absorption of the calcium salts, yet we do not think of it as a disease but regard it solely as a developmental affair.

Juvenile osteochondritis always begins about the fourth or fifth year of life, occurring a little more frequently in boys than girls. It is a nonsuppurating and a nonabsorbing process and never results in ankylosis. It most often simulates a beginning tuberculous involvement, the symptoms being lameness, stiffness, slight limitation of motion and pain on walking, occasional night cries, but rarely is there any elevation of temperature. The process differs from tuberculosis in that the symptoms are intermittent and the muscular spasm is seldom very marked, so that on examination one can usually put the leg through a fairly complete range of motion, and there is but little if any muscular atrophy.

The most prominent feature is pain and this, in my opinion, is due to the inability of the acetabulum to promptly conform to the changed condition of the head of the femur. As the head flattens out it becomes wider and necessitates a greater diameter to the acetabulum, which can only be produced by pressure and a kind of wearing down process that requires time. Once the acetabulum conforms to the head the pain disappears as well as all other symptoms.

In making the diagnosis the roentgen-ray picture is pathognomonic. No other condition produces such a change, which is a flattening out of the head and a thickening and shortening of the neck. It is doubtful if one could be sure of the diagnosis without the roentgen ray.

\* Read before the Sixty-Third Annual Meeting of the Missouri State Medical Association, Jefferson City, April 6-8, 1920.



The treatment varies somewhat owing to the stage of the condition. If one sees the case early before much thickening of the neck has occurred it is advisable to prevent weight-bearing, and make an attempt to improve the general condition of the child. If, on the other hand, the flattening appears quite complete and the chief symptom is pain, immobilization and continuing of weight-bearing will assist the acetabulum in conforming to the head and produce relief.

I wish to report two rather typical cases.

**CASE 1.**—A girl, aged 5½ years. Seen in the University of Kansas, Hospital Clinic, October 1. Only child. Parents living, well, no miscarriages. Child was always well, until last March, when began complaining of right hip following a slight injury. The pain discontinued in three or four days and she was symptom free for two months, then complained again for a week; then symptom free until August, since then has had discomfort at times and has not been free from pain more than a week or so at a time. The interesting point about this case is that she only complained of right hip and the roentgen ray showed a very definite involvement of the left hip, in fact, we thought the roentgen-ray plate had been loaded wrong when we first saw the picture, but on closer examination one can make out that the right hip is involved. The child was put to bed in a plaster cast for fourteen weeks. The cast was then removed and child permitted to get up. After about two weeks all restrictions removed and child has been about as usual for past six weeks, and has made no complaint. While she was in bed every effort was made to improve her condition and especial attention given to the diet with the idea of hardening the bones.

Her Wassermann is negative, and there are no signs of congenital syphilis.

**CASE 2.**—A girl, aged 12 years. First seen Jan. 3, 1920, at the University of Kansas Clinic. Came in complaining of left hip and stated that she had tuberculosis of the hip joint. She stated that her mother was living and well but that her father had died of pulmonary tuberculosis. Her trouble began when she was 5½ years old and had been more or less continuous. She had been able to go to school most of the time but unable to run and play at times. Her motion was fairly free except slight limitation in abduction and rotation. Her Wassermann was 4+ positive and her roentgen ray showed typical juvenile osteochondritis change. A plaster cast was applied and she continued to go to school. At the end of four weeks the cast was removed and aside from one day she has had no pain. She was referred for arsphenamin after cast was removed and is now getting a regular course of treatment. So far as her hip is concerned we regard it as being practically well and do not expect much change to occur in the bone.

#### CONCLUSIONS

1. Juvenile osteochondritis is the result of improper development of the head and neck of the femur. It may involve other bones.

2. Immobilization to relieve pain, and relief from weight-bearing to prevent increased deformity, are the principles of treatment to be applied for a short time only.

3. The condition always begins about the fifth year.

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#### OPERATIVE AND NONOPERATIVE TREATMENT OF TUBERCULOSIS OF THE SPINE. A COMPARISON\*

C. A. STONE, M.D.  
ST. LOUIS

It has now been nearly nine years since Hibbs first described his ankylosing operation for tuberculous spine and later the same year Albee presented his plan of using a bone graft.

For two or three years we were of the same opinion as many other orthopedic men over the country and a number of these operations were done, both on adults and on children. It was felt that at last a real means for preventing terrible hunchbacks and curing spondylitis had been found; but gradually a little doubt began to creep into our minds and as time went on it became a conviction. Our operative cases were not doing as marvelously as reports had led us to believe they would.

It must be distinctly kept in mind that in this paper we are considering only children who have not passed 14 years. This age was not set arbitrarily to exclude any certain group, but for scientific purposes. In the dispensary 14 years is the limit for pediatrics, nor is anyone over this age admitted to the Children's Hospital.

The total number of cases to be reviewed is sixty-five. Thirty-three were operated on in one way or another while the remaining thirty-two received what we will call conservative treatment. Many cases treated have been excluded because they have been under our care an insufficient length of time to make just comparison. The total number, sixty-five, is taken from the records during practically the same period of time.

**Conservative Treatment.**—Under this heading are included those children who were given supports of various kinds and of recognized efficiency, according to the individual requirements of the child. If, when first seen and examined, the child presents only symptoms of beginning tuberculosis it is given a plaster jacket and restricted in its activities. The length of the jacket varies with the portion of the spine involved. The higher up the process the higher the jacket, covering shoulders, supporting the chin or including the head, if found necessary. Possibly some other contrivance is used to take the place of a head plaster when the destructive process is very high up.

The patients presenting very acute symptoms at first or later are kept recumbent on a gas pipe frame or plaster bed, possibly with some form of traction, until such symptoms have subsided, then ambulatory care is instituted. In the later stages a simple back brace is given,

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and as the cure progresses this is left off at night and then for gradually increasing periods. No set length of time may be given for the continuance of treatment, and it is necessary at times to begin all over because of an exacerbation of symptoms.

No attempt has been made to go into this treatment in detail; it's an old story and may be read in any textbook on orthopedic surgery. However, it was thought best to outline briefly what is meant by the term "conservatism." Abscesses are taken care of as they develop.

*Children Treated by the Above Method.*—These children number thirty-two and range from 2 to 13 years of age. None have been considered in this classification unless treated over a long period of time. Eight of them had marked deformity when so-called healing had taken place. Ten others have kyphosities less deforming, while fourteen have what may be termed very good backs and a small kyphos.

One boy also had a tuberculous hip and after being in what we thought a fair condition following more than four years of care, came into the clinic after a three days' illness and died suddenly while in the clinic. No necropsy was obtained. Another, who had been under observation for a number of years (seven or eight), got so he had difficulty in walking. Being about 17 years old and full of wisdom, he heeded not. Paraplegia came on. A long period of recumbency was necessary to bring about improvement. Six, or  $18\frac{2}{3}$  per cent., had abscesses. This very closely approaches the percentage of 19.7 given for a series of 380 cases. We have not deemed it necessary to state either the region or duration of the ensuing sinus.

*Operative Treatment.*—In this group are thirty-three. Eight cases were done according to the procedure of Hibbs, which consists of breaking down the spinous processes and destroying the articular surfaces of the laminae. Four of these eight had abscesses later. Twenty-four of the group were operated after the method described by Albee, that is, a bone graft was taken from the tibia and inserted into the split spinous processes of the vertebrae and anchored there. Ten of these twenty-four were later complicated by abscesses. One died of shock the day of the operation. Two died within three months, of tuberculous meningitis. A fourth died a year after operation. Another child went to a different hospital where, under anesthesia, a fairly large kyphos was forcibly straightened. Result, the child died promptly, making a total of five deaths as against one. One developed total paralysis of both legs one and one-half years after operation.

*After Care of Operative Cases.*—We learned immediately that cases operated on could not be let go without some kind of support. A very

few were given braces and did nicely, but, as you all know, some tuberculous spines get along very well with a small amount of care. There have been only a few cases where support has not been necessary for three or more years. Three did remarkably well; one seen four years after support had been discontinued, was in fine condition. The fact is we have had to continue our care the same as if nothing had been done. We made tracings to show that deformity has increased in some.

*Kind of Cases Selected for Operation.*—It may be asked, were not only the worst cases operated? No, such was not the fact, for children in good condition, either with small or large kyphos, were done as well as those who were in poor condition and had a deformity either small or large. Symptoms were not taken into consideration. It was thought this procedure was the best thing for them and, where consent was obtainable, the operation was done. At least one child had done poorly, its general health being bad. The parents had not been cooperative. Consent was obtained and a bone graft done. This one has improved steadily, three years after treatment with recumbency, plaster jackets and braces having been carried out.<sup>1</sup>

#### CONCLUSIONS

1. About 19 per cent. of Pott's disease treated in the usual way developed abscesses.
2. Fourteen, or over 42 per cent., of thirty-three operative cases, had abscesses.
3. Operation has not prevented increase in deformity.
4. After care must be carried out during as long a time following operation as if nothing had been done.
5. Mortality of operative cases was 15 per cent.
6. Ankylosing operation for tuberculous spine in children is not to be recommended.

400 Metropolitan Building.

#### TUBERCULOSIS OF THE HIP\*

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Tuberculosis affecting the hip joint is by no means a rare condition and large numbers of cases have been studied from every phase by eminent men in various medical centers and their results given to the profession, so that it is not with the idea of bringing out any startling revelation that this series of cases is presented.

<sup>1</sup> Since reading the paper it has been learned that this child has developed a paraplegia.

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It was thought, however, that a study of the cases treated at the St. Louis Children's Hospital, Barnes Hospital and the Washington University Dispensary, during the past eight years, would show some cases of general interest from the standpoint of diagnosis and treatment.

When the study of these case records was started it was found that 147 cases had been admitted to the dispensary on which a provisional diagnosis of tuberculosis of the hip was made. On going over the records it was found that a number of these cases had subsequently been shown by further study to have some condition other than tuberculosis of the hip. These cases proved very interesting from the standpoint of differential diagnosis, as they showed the fallacy of depending on symptoms and physical signs alone in making a diagnosis of tuberculosis of the hip.

Another group of cases only visited the clinic a few times and were never admitted to the hospital for careful study. These, together with the cases that had been under treatment less than six months, were discarded.

It was then decided to limit the study to those cases under 18 years of age, as the disease in the adult presents a somewhat different problem. These eliminations left seventy-four cases, the study of which is the basis of this paper.

The relative frequency of the disease is shown by the fact that of 3,519 new admissions to the orthopedic clinic from 1915 to 1919, 398 were diagnosed bone and joint tuberculosis, and of these 129 were of the hip, 158 of the vertebrae and 111 of other bones and joints. Of the cases selected for study, forty-three were males and thirty-one females. The following table shows the ages at which symptoms were said to have first appeared:

Years Old	Cases
1 to 2.....	5
2 to 3.....	7
3 to 4.....	6
4 to 5.....	11
5 to 6.....	8
6 to 7.....	10
7 to 8.....	9
8 to 9.....	4
9 to 10.....	3
10 to 11.....	4
11 to 12.....	1
12 to 18.....	6

It will be noted that 56 of the 74 cases developed before the age of 8 and that 29 of these were between the ages of 4 and 7.

The onset of tuberculosis of the hip, like tuberculosis elsewhere, is usually insidious. This should not lead one to rule out tuberculosis in a case where the best obtainable history seems to point to a sudden onset. Two of our cases developed symptoms while in hospital for acute exanthemata, without any previous history of limp or any symptoms referable to the

extremities. The onset of their hip disease was acute, but ran a typical chronic course, von Pirquets were positive and roentgen rays showed bone destruction.

The rôle of trauma in the etiology is somewhat difficult to determine. In a large number of our cases parents felt sure that the trouble started with a specifically named injury, but in many of the cases it was brought out that no trouble referable to the hip had been noticed until some time (weeks or months) after the injury. As children are constantly having more or less severe falls and other injuries and as we repeatedly get histories of similar falls causing the paralysis of poliomyelitis, the connection is usually vague. On the other hand, it is perfectly reasonable to suppose that actual trauma of the joint might determine the site of a tuberculous lesion. The following case is interesting from this standpoint:

J. D., colored, female, aged 7. Family history and past history unimportant. Was perfectly well and played with other children until she had a fall on the ice, striking on the right hip. Has limped since and last few days before admission—two months after injury—has been unable to bear weight on the limb. Examination shows the hip held rigid by muscle spasm at 20 degrees flexion. No measured shortening. Roentgen ray showed considerable destruction of the head of the femur. Wassermann negative, Pirquet positive.

*Symptoms and Physical Signs.*—Of the various symptoms and physical signs usually ascribed to tuberculosis of the hip by textbooks on orthopedic surgery, persistent limp and muscle spasm on attempted passive motion of the hip are the constant ones and will be referred to as the cardinal signs. They are the first to appear and the last to leave and, demonstrated in a child, are enough to warrant confinement to bed until a careful study has eliminated tuberculosis of the hip. Night cry was a fairly constant symptom in our series, but pain when awake, except on sudden motion of the joint, was not common in the early cases. Evening elevation of temperature, night sweats, loss of weight and symptoms commonly associated with tuberculosis, did not appear in a majority of early cases. Deformity, most apparent with the patient lying supine, was present in most of our cases and was represented by various degrees of flexion, usually accompanied by some abduction or adduction. Muscle atrophy is due to disuse and does not become conspicuous until motion has been restricted for some time. Measured shortening is not found until some deformity of the head or neck has taken place. None of these signs, except limp and muscle spasm, appear constantly and are not at all necessary in arriving at a diagnosis.

*Diagnosis.*—A positive diagnosis of tuberculosis of the hip cannot be made except by the examination of material from the involved area. A diagnosis conclusive enough to warrant ra-

tional treatment as such can be made, however, from the careful study of the case, preferably in a hospital where roentgen ray and laboratory facilities are at hand and a record of the patient's symptoms, night and day, can be accurately kept.

The examination of every patient complaining of suspicious symptoms should include examination of the gait, if walking, attitude while lying, movement and restriction of movement of the hip and adjacent joints, the examination made with the child stripped of all clothing. The patients themselves often complain that their gain on motion is confined to the knee joint. Muscle spasm will guard the motion of the affected joint and will give the positive clue in these cases. Disease of the lower lumbar vertebrae and sacroiliac joints is not easily differentiated. Involvement of these areas will often give pain referred to the hip joint and irritation of the psoas muscle supplies the deformity and restriction of motion. Abduction and external rotation, however, are usually not restricted in vertebral tuberculosis, while if the disease is in the hip joint these motions are prominently limited. One of our cases of vertebral tuberculosis so definitely simulated hip disease that he was treated by leg traction for several weeks in spite of negative roentgen rays until a slight prominence in the lower lumbar region caused roentgen rays to be taken which showed beginning destruction of the fourth lumbar vertebra. Even at this time restriction of motion of the spine was not marked. Syphilis affecting the hip may give the cardinal signs of tuberculosis and the roentgen ray may show destruction of the head of the femur which cannot be definitely said to be one or the other. The positive Wassermann should make the diagnosis of syphilis fairly conclusive, but it must be remembered that it is possible for a child with syphilis to have tuberculosis of the hip, and such a case should be treated with fixation until the lesion responds to syphilitic treatment.

Perthes' disease, while it gives the cardinal signs of tuberculosis of the hip, shows in the roentgen ray as a flattening of the head of the femur without the irregular outline of actual bone destruction. These cases should be observed frequently and carefully and in the opinion of the writer should be treated as tuberculosis until tuberculosis is positively ruled out or the early disappearance of the symptoms makes the diagnosis of Perthes' disease the more probable one.

Where osteomyelitis of the upper end of the femur is responsible for symptoms which may be confused with disease of the joint, roentgen rays will show bone destruction in the shaft of the bone instead of the epiphysis.

The fact that a previous diagnosis of rheumatism was made and treatment with medicine

by mouth was carried out over various periods of time in nine of our cases, not only shows a lack of appreciation of the nature of tuberculosis of the hip, but also very little knowledge of the fundamentals of its diagnosis and treatment. Nontuberculous, infectious arthritis, involving the hip joint alone, undoubtedly does occur, but it should be treated with fixation and traction and repeated negative von Pirquets should cause a thorough search to be made for the focus of infection.

*Prognosis.*—The prognosis should never be too sanguine. Under the most careful rational treatment the course is long and tedious and frequently there are set-backs discouraging to both doctor and parents. The parents should be made to understand thoroughly the seriousness of the condition when treatment is begun and at the same time assured that it is by no means hopeless and that by infinite care and attention to the details of treatment the patient may obtain a good functioning joint without deformity. The possibility of abscess formation should be mentioned and occasional unpreventable metastasis to the meninges and lungs. Seen early and under the most favorable circumstances for treatment the minimum time for treatment with apparatus should be put at two years, but the great majority of cases will require much longer time. The average length of time that apparatus was worn in the eighteen cases of our series who have been recently examined and found clinically quiescent, was 32.4 months. Fourteen cases developed abscesses. In six of these the abscess had developed at some time before applying at the clinic for treatment, and in eight it developed while under treatment by us. Four cases died, three of tuberculous meningitis and one of general tuberculosis.

*Treatment.*—Many appliances are used in the local treatment of hip joint disease. These differ in detail to correspond with individual ideas of the best method of application of a fundamental principle subscribed to by all—put the joint at rest in a position that will give ultimate function. The position of anatomic rest is that of about 20 degrees abduction and 10 degrees flexion and approximately this position is maintained as long as muscle spasm persists. Some appliance for fixing the limb in a position of rest having been employed, the greatest care should be taken to improve the general health of the patient by proper nourishment, fresh air, sunlight and general hygienic measures. Contentedness is undoubtedly quite a factor in the power of the individual to combat disease and for this reason ambulatory treatment is probably best where the process is not acute and where deformity does not exist, but it has been the policy of our clinic, whenever possible, to treat all cases in the hospital for several weeks at least, so that the case can be studied from



both medical and sociologic standpoints before splints are applied and ambulatory treatment started. In the hospital they are immediately placed on a Bradford frame and enough traction exertion on the leg to overcome muscle spasm. In cases with deformity, traction is started in the line of deformity and the line gradually changed until the desired position is obtained. When deformity has been overcome and acute symptoms have disappeared, an ambulatory splint is applied and the patient is allowed to be on crutches for an increasing period of time each day. The type of splint used depends largely on the care the patient is liable to receive after leaving the hospital. If conditions at home are considered such that the patient is liable not to receive much care and attention, a plaster-of-Paris spica is applied from the costal margin down to and including the foot, and an extension sole for the other foot and crutches are supplied. If it is thought that the patient will receive intelligent attention, a Bradford traction-abduction splint is applied and instructions given the parents that it is only to be removed for bathing when the patient is lying down. This splint is also to be used with crutches and an extension sole on the unaffected side.

After leaving the hospital these patients are seen in the clinic once a week, the condition of the brace or cast noted and any desired changes made. Muscle spasm is gently tested but frequent attempts to ascertain the amount of motion in the joints are strictly avoided. If an abscess appears superficially the patient is once more placed on a frame with traction, and if it shows any tendency to undermine other tissues it is incised, and pocketing is freely opened, pus is evacuated and the wound closed without drainage.

Most of the cases have had the advantage of treatment at Ridge Farm, a convalescent hospital and farm located a few miles from St. Louis and operated by the St. Louis Children's Hospital. Here they are constantly in the open with prescribed diet and direct exposure of the skin to the sun, after the method of Rollier, is practiced when weather permits.

When cases wearing apparatus have improved to such an extent that no muscle spasm or pain on motion can be demonstrated they are fitted with what we term a convalescent splint, which attaches to shoe and places most of the body weight on the tuberosity of the ischium instead of the hip joint. Crutches and extension sole are then discarded and the patient is allowed to walk. After this has been worn several months without symptoms, it is left off for increasing periods of time so that normal weight-bearing is practiced gradually.

**Results.**—Twenty-eight of the cases were located for an examination of their condition at the present time and the results in the cases

examined were very gratifying. Eighteen cases had no active symptoms, that is, no muscle spasm or pain on motion. Of these quiescent cases two had apparently firm ankylosis in good position, and the remaining sixteen had motion varying from a few degrees to almost normal. Of this number thirteen had been without apparatus of any sort for more than six months and five were still wearing convalescent braces. Eleven cases had from 1 to 2.5 inches shortening, while seven had less than 1 inch. The records showed that four cases had died of tuberculosis.

819 University Building.

#### DISCUSSION

DR. J. D. GRIFFITH, Kansas City: I do not think there is any doubt that Dr. Francisco and all of you believe syphilis has a great deal to do with Perthes' disease. The syphilitic infection, transmitted by heredity, if you choose to call it so, has disturbed the metabolic processes to such an extent as to give you a flattening of the epiphysis of one or both femurs. I think Dr. Francisco has succeeded in giving you the symptoms, or rather the difference in symptoms between that and a tuberculous hip joint in the fact that this pain is intermittent—it is not constant as in tuberculous trouble. The roentgen ray also shows the difference in the appearance of the bone. Then there is the fact that tuberculous infection has not been demonstrated in these cases. There was a positive Wassermann in one or two but not in the others; but the absence of a positive Wassermann is not positive evidence of the absence of syphilis.

Dr. Stone spoke of these cases of tuberculous spinal trouble and has shown that the Albee and Hibbs operations are not all perfectly safe and that the use of the brace has come and will stay. The question of whether Albee was almost certain when he came out with his operative interference, that it would stop this thing of having another abscess—well, we have had the abscesses. That the brace should be used probably more frequently in children, I do not know. I only know this, that the Albee operation has succeeded in some grown persons. We had two cases in the last year, Dr. Francisco and myself, one of them a young man whom I operated on at 18. We planted a piece of bone. I was unfortunate in fixing a plaster cast. I put the young man on a Goldthwaite frame and put on a good layer of plaster. I had him on his stomach, the graft being at the twelfth dorsal and first lumbar. When I put in the graft—about 8 inches in length—splinted the spinal process, strapped it in and it was on top. I sent him to the ward and in six weeks afterwards I was looking him over and things did not smell exactly right, so I made a large opening in the back and found about 3 inches of the graft exposed and sloughing. That taught me that next time I did one of these things I would put the patient on his back instead of his stomach. The graft did not die in little pieces, it was covered up with granulations and very little necrosis occurred in the graft. The deposit was not so large along the spinal process, but on the other side there was an enormous deposit of bone.

Dr. Hoyt spoke of the sociologic trouble we have with these tuberculosis patients. What are we going to do with these latent cases, as you might call them, of tuberculosis? Of course the advanced cases should be isolated, but it is mighty hard for those who have seemingly recovered completely.

In regard to Dr. Stewart's paper, I said a year or so ago at the American Orthopedic Association

that I was always in doubt about my tuberculous hip cases. The ones that got well I thought I had made a mistake in the diagnosis, and the ones that did not get well I was satisfied were tuberculous.

I do not think it is safe to promise a case of tuberculosis of the spine immunity from any kind of support until a long bony process has been thoroughly established, and that means 21 or 22 years of age at least. I speak of this feelingly because I found it so in a member of my family.

Frazer, in his most estimable work on tuberculosis of the bone, speaks of the frequency of tuberculosis in children, and he emphasizes the fact that 82 per cent. of the children who have bone tuberculosis, have not only the human tubercle, but the bovine. And let me say to you this, that in my tuberculous cases where I have been giving vaccines I have been using the mixed vaccine, the bovine and the human, because they are getting the milk and that is where the bovine tuberculosis comes from. The other two forms of tubercle bacilli we might as well throw out.

We must remember that the tubercle is more apt to insert itself in the bone in children, in adults in the lung, and in grown folks you will find the synovial membrane infected more frequently; so this form of tuberculosis is nearly always a mixed one. I hope you will remember that, because we do not know that the milk used by the children is always pure.

I have always believed that trauma has a great deal to do with the place of least resistance. I know that some men say that the periosteum can be thrown away, but every surgeon knows that when you disturb the periosteum you disturb the circulation of the center of the bone. The trouble is not in the periosteum, but in the myeloid structure of the bone, and hence we have a tuberculous process there in children from some kind of trauma. I think trauma should be taken into consideration, although Frazer says it does not amount to much. And yet in Frazer's recent article and books on the question of heredity you will be surprised to see how many things have a great deal to do with tuberculosis.

DR. R. M. SCHAUFFLER, Kansas City: There is some sort of peculiar bone dystrophy to which in the young the head of the femur is peculiarly susceptible, but I do not know what it is. I do not know the etiology of it. Perthes' disease is one manifestation of that tendency. There are a number of cases where the bone bends in the neck along the epiphysis; the head keeps its contour perfectly but it lops down like a plant pinched off just below the flower. The roentgen ray men call it Perthes' disease by default, but it does not show the typical changes of Perthes' disease. You have some obscure systemic cause of malnutrition. In some of the cases there is disturbance of the ductless glands. Some say pituitary disease, but there is probably also some mechanical reason in the head of the femur, such as in anatomic abnormality in the blood supply which makes this peculiar localized manifestation of osteomalacia. It does not show in any other part of the body, and I know of no one who describes it. The cases got better, but they got better at a price, and the end result is that of a mechanical affair rather than a disease condition.

I was glad to hear Dr. Stone say what he did in comparing the conservative and radical treatments, because I notice a little tendency on the part of the surgeons who are doing very well with their bone graft surgery in fractures to think that a graft is a panacea for Pott's disease. If you know a little more you know that that is not true, and no man had better fool with the Albee operation on the spine unless he is thoroughly competent to treat the spine by mechanical means afterward.

I do not think the mortality ought to be as high as it is in this series of cases. They had bad luck. The question is, are the patients enough better to

pay for the radical procedure. The question of the age of children has a good deal to do with it. These children were all under 14 years of age. You know it is no use to do arthrodesis operations on children too young, because the joints will mobilize again. We have to draw the line somewhere. Albee's operation is better for half-grown children and for adults to reduce the long brace period. You do not get them out of the brace altogether. There will be an age limit drawn somewhere; I cannot tell it, but I would suggest 10 years—that above 10 years you can expect much more success than under 10 with your Albee.

I cannot add anything to Dr. Hoyt's paper. He suggests that we ought to have another "Mount Vernon" in Missouri for bone tuberculosis, plus a trade school, and everybody ought to say amen to that.

Dr. Stewart's paper is all good, sound gospel. I tried to think what they might be doing a little better than I, and it occurred to me that he keeps his children a good deal longer on crutches with a high shoe on the well foot. They are all anxious to get up and walk, but I find you cannot make a mistake by keeping them in bed on a Bradford frame with extension for a considerable time. The position on the frame is important. There is a tendency to flex and adduct the limb. They will all have an unnecessarily shortened leg if you do not make an unusual effort to keep the limb extended and abducted and so avoid a later tilting of the pelvis in the wrong direction. You have to keep that in mind all the time. You put a child in a soft bed and it will have flexion right away. You have to fight for the correct position if you are going to get it.

His cases have the advantage of prompt treatment and of direct exposure of the whole body to sunlight, which is of course very important. I would be glad to have the doctor say in closing whether he thinks those cases that have had a lot of sunlight on the joint have more motion than similar cases treated equally well otherwise but without heliotherapy.

The one thing that is lacking about Dr. Stewart's paper is that he did not go far enough and analyze his cases. I would like to have him tell how much motion he got, and make some estimate of the percentage of permanent disability in recovered cases.

DR. C. B. FRANCISCO, Kansas City: I would like to get the general men, the men who see these cases first and who are thinking about them, to think in terms of mechanical hips, in terms of mechanics and not of disease. In treating these cases we must expect no change in this condition after it has occurred. These hips remain flattened out. I had the good fortune to see a good many of these in France. They went through the war all right, but after the armistice was signed, knowing that they had had previous trouble with their hips, would report for roentgen ray, which would be interpreted by the general medical officer as an advanced case of tuberculosis of the hip. We saw a good many of these fellows in which the hip appeared a good deal as these hips appear, and yet they had been able to do full military duty. That seems to be a pretty good proof that these cases are not disease but purely a faulty metabolic process.

DR. FRANK D. DICKSON, Kansas City: I was very glad to hear Dr. Schaufler mention, in connection with Perthes' disease, the subject of the glands of internal secretion, because we do know the effect that the pituitary has on the osseous system. I have been very definitely impressed in the last year or so with the number of cases I have seen in which, in conjunction with these peculiar mechanical deformities of the hip, we have also found very definite symptoms of hypopituitarism. I am inclined to think that in a large percentage of these cases we are dealing with



some very definite defect in metabolism due to the glands of internal secretion.

In regard to Dr. Stone's paper on the Albee operation, I have not had the same experience he has. I have in mind a series of twenty-two cases in which we did that operation with no fatalities. I do agree with Dr. Schaeffer that a support should be worn for a long time after this. We always have them wear a support for at least a year; there is a definite improvement in the amount of deformity, and certainly we have never seen a case die as a result of the Albee operation. This series was followed for a fairly long period of time.

In reference to Dr. Stewart's paper, I was interested in one paragraph in which he said a number of cases were admitted to the hospital and never showed up again. We have a large number of hips in which you are not dealing with tuberculosis at all which are occasionally treated as tuberculosis, and Dr. Griffith's statement that he thought those that got well he must have missed the diagnosis bears this out. You do get definite epiphysitis due to focal infections which under proper treatment will subside. I do not think these children should be subjected to continuous, long drawn out treatment, such as is given for tuberculosis of the hip, until we have definitely proven in our own mind by cleaning up the foci of infection, together with careful study, that we are dealing with a tuberculous hip. If we watch them carefully, particularly those in which we have an acute onset with rather rapid subsidence, this occurring several times, examine carefully and work the case out thoroughly and you will find very often that you are not dealing with a tuberculous hip, but an acute focal infection which a short period of rest will bring out nicely.

DR. C. A. STONE, St. Louis: Possibly some think we are unfortunate in these cases. We have watched them since we first began the Albee eight or nine years ago. Most of these cases were done by one of the best orthopedic men in this country, and I am sorry if the results were not any better. Another thing, we intended to report these cases two and a half years ago, before we got into the war, and it has been delayed because of that. We think we have a very good series of tuberculous hips.

Dr. Stewart was unable to bring out a lot of things on account of the short time, one thing being that these hips have a large range of motion. Certainly all the hips we see are not tuberculous, and we have excluded all cases except those we thought were absolutely tuberculous, either of spine or hip. I did not give any definite age, but it was manifestly a fact that the nearer the children reached 12 or 14 the better they did and the younger they were the worse they did.

Dr. Griffith also brought up the question of trauma. I have thought about it a great deal, but it has always been a question with me whether the tuberculosis is due to trauma or whether the child complains of trauma because this place has already been affected by tuberculosis. It is very hard to decide.

DR. J. EDGAR STEWART, St. Louis: I just want to say to Dr. Schaeffer that I am very sorry the records did not show definitely whether the cases that had been treated by heliotherapy gave any better movement than the others. All the cases treated at Ridge Farm had heliotherapy, and I think it was our opinion that those cases did better than the others, but whether it was due to the heliotherapy or to the general hygienic treatment it is impossible to say. I also regret that in shortening my paper I left out some other things in the statistics on the amount of deformity, etc. But in the cases examined there were only two with ankylosis and they had little deformity. The cases with motion all had

a little deformity but they walked very well. However, this is only twenty-eight of the seventy-four cases we examined; the rest we were unable to locate, but undoubtedly of that number some stopped treatment before they were cured because they were not satisfied with the condition—the parents were not satisfied—and if these cases could be located the results would not be as good.

I agree with Dr. Dickson that a good many cases that appear to be tuberculosis of the hip are not such, and for that reason cases that came to the clinic only a few times were not included in this series. I think it is altogether possible that some of these cases might not have been tuberculosis of the hip, but I believe the majority of them were because they were carefully worked up.

## THE EXAMINATION OF THE INFANT\*

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The writer wishes to present the following outline for the examination of infants, believing that a routine is conducive to carefulness. It is advantageous for a physician to follow some system so that he may at least not overlook important conditions:

### OUTLINE FOR EXAMINATION OF INFANT

*History.*—Of the infant, of the family (the intelligence and nervous stability of parents should be ascertained).

*Undress the Baby.*—Notice the amount of clothing. *Intelligence.*

*Attitude.*—Posture, stiffness or swelling of arms and legs, lack of resistance, tenderness, knee jerks, Kernig's sign, neck sign (Brudzinski).

*Development.*—Weight and height of child, progress in gaining, comparison with average, muscular tone and activity, deformities, ability to hold up head and back.

*Inspection.*—Skin: Color, pallor, eruption. Glands. Head: Shape, rolling, sweating, circumference, Macewen sign, fontanelle (size, bulging or sunken), facial reflex (Chvostek). Hair, ears (bulging, tender, discharging). Eyes: strabismus, regularity of pupils, nystagmus, color of sclerotics. Nose: shape, snuffles, discharge. Mouth: scars on lips, presence and condition of teeth, infection of mouth or throat, mouth breathing, difficult nursing, hoarse or frequent crying. Chest: Respiration, frequency, grunting, air hunger. Apex beat. Shape and deformities of chest, rosary; opisthotonos and head retraction. Abdomen: Appearance, size, tympanites, retraction, distention of bladder. Genitals: Hernia, hydrocele, undescended testicle, ulcer of meatus, foreskin, vulvovaginitis. Anus: Scars, prolapse. Extremities: Development, function.

*Percussion.*—Light percussion used in infant examination.

*Palpation.*—Abdominal viscera, areas of tenderness, thrills and fremitus.

*Auscultation.*—Peculiarities of lung sounds in infancy, d'Espine's sign, asthmatoïd wheeze. Congenital, functional and organic cardiac abnormalities.

### Temperature of Infant.

\* Read before the Sixty-Third Annual Meeting of the Missouri State Medical Association, Jefferson City, April 6-8, 1920.

*Urine.*—Securing of specimen from every sick child, chemical and microscopic examination; importance of detecting the presence of pus.

*Blood.*—Cell counts and smears. Stools for special examination, blood for Wassermann or culture, spinal fluid and sputum are to be obtained when diagnosis warrants.

#### DISCUSSION

Owing to limited time the writer can discuss only part of the subjects suggested in the outline.

During the elicitation of the history from the parents an opportunity is given for the infant to become somewhat accustomed to the presence of the examiner. The bugbear which so many in the profession feel towards children's work will be dissipated by the acquisition of experience and forbearance on the part of the examiner. When one reaches the stage that he no longer loses his temper while handling a neuropathic infant, the work will be easier and more satisfactory. It is useless to blame the infant for unruliness during the examination, which may be a result of a neuropathic heredity or the lack of training by the family, or of fright and the untactful procedure of the physician.

As a rule the younger the infant the easier the examination; in the first few months there is little attention paid, except to the application of a cold hand or the stethoscope, neither of which for some reason is welcomed by the child. Babies between 6 and 12 months are easily frightened and usually cry during a portion of your visit, during which crying period one may listen to the lungs or inspect the mouth.<sup>1</sup> The neuropathic infant from 6 to 18 months causes a stormy scene and it is with some difficulty that the abdomen is clearly palpated, that stiffness of the neck and knees is excluded from the picture, and the heart sounds heard.

As soon as the child has become somewhat used to one's presence and before it is disturbed by undressing, a great deal can be learned by a quiet observation of the child's attitude, movements, intelligence, nervous manifestations, general appearance, respiration, and before the infant is aware of what one is doing the abdomen may be palpated.

The intelligence of the infant can be ascertained from a careful observation: the facial expression, the tendency of the eyes to follow objects as early as 4 months of age, the recognition of familiar faces, a normal smile, recognition of sounds, ability to reach for and hold objects at 5 months, and to sit up at from 7 to 9 months. Many young infants are being adopted and the question of the intelligence is a matter for determination.

1. Holt's book on Diseases of Children states that auscultation of the lungs is impossible with a crying child. Griffith in his new book expresses the opposite view. The writer believes that the deep inspiration accompanying crying is a help in determining the character of the breathing.

For accurate weighing and examining the child must be completely undressed as a routine. About the time that the infant is undressed it proceeds without malice aforethought to urinate. It is a good custom to anticipate this with some sort of a receptacle at hand. (A Spicer cup is suitable and can be retained inside of the diaper.)

*Clothing.*—The amount of clothing which some infants wear has a bearing of importance. Miliaria occurs from excessive sweating, constant colds from lying in damp cloths. Retention of body heat from too many clothes has an influence on the production of summer complaint as shown by our own Chicago pediatricists, and is a factor in the causation of rickets.

*Attitude.*—A peculiar semiflexed position of the body is seen in scurvy, likewise in the pseudoparalysis of congenital syphilis and rickets. Tenderness on handling, especially of the neck, back or extremities, should be recognized. Spasticity or rigidity of the legs follows cerebral or meningeal hemorrhage, and the opposite state of flaccidity, may be found. Kernig and Brudzinski neck signs are of value in children, as is also accentuation of the knee jerks; absent knee jerks are found not only in poliomyelitis but in the severe infections and wasting diseases.

*Development.*—Our experience is that ordinary weighing of infants is unreliable. The progress in gaining is as important as the comparison of weight for the age. The length of the child has not so much importance in the examination in infancy as in later childhood. The determination of the degree of muscular tone is of great importance, and its association with the activity and nutrition of the child. The flabbiness of the muscles of the back from brain paralysis or from infantile atrophy is seen in infants who are unable to hold up the head or spine. This muscle degeneration is responsible for a postural kyphosis which is frequently mistaken for vertebral disease.

*Skin.*—One of the surprises continually met is that marked pallor in infancy may not mean anemia. In the palest of children the hemoglobin by Tallqvist or Sahle may be 90 to 100 F. One learns to distinguish between pallor and waxiness.

Glands the size of small shot or buck shot are common and of little significance, more frequently found in the postcervical region and, in marasmus babies, also in the groin. It is so common to find epitrochlear glands in all states of health and nutrition that since we have made their search a part of the routine their presence seems to have no diagnostic importance.

#### REGIONAL INSPECTION OF BODY

*Head.*—Among the numerous features to be observed one would especially mention the shape and size. A recognition of abnormalities



helps in the diagnosis of rickets, idiocy and hydrocephalus. We have seen a few instances of familial tendency to skull enlargement. A bulging fontanelle and a positive Macewen cracked-pot percussion sound have an equal significance in indicating hydrocephalus. Both may be present in cerebral hemorrhage of the new-born. The facial reflex (Chvostek) in infantile tetany is interesting when present, but in rickets or tetany it is infrequently observed in our experience. Coarse hair is found in cretinism, scanty hair is seen at the back of the head with infants who are restless or are head rollers.

*Ear.*—In every case of high temperature with or without pneumonia the ears should be examined. The history of an acute rhinitis, unusual crying, pain, putting hand to ear repeatedly, should suggest the ear as a source of trouble. It seems to me that it takes all of these findings, coupled with a leukocytosis and the local manifestation of tenderness on palpation to make the diagnosis before appearance of a discharge. When the auditory canal in infants is large enough, the infant quiet enough, and the local condition in the drum manifest enough, an examination with the speculum is of value. An ear discharge may appear without suspicion, or in spite of a negative speculum examination.

*Eyes.*—One learns that extreme states in infancy are reflected in the appearance of the eyes. Often one sees the sunken and unresponsive eye in the baby who is toxic or has had acute water loss, even in a few hours from the onset. Nystagmus is a frequent manifestation in new-born infants. The sclerotics will be jaundiced in 33 per cent. of all new-born babies, including all the premature, they will be blue in certain normal individuals and in the rare condition of fragilitas ossium. Overflow of tears is common in babies from congenital occlusion of the tear ducts. Momentary strabismus when the head is flexed on the chest has recently been described as a valuable early sign in tuberculous meningitis.

*Nose.*—We have found saddle nose a very useful symptom in discovering syphilis in babies, seen usually after the stage of active snuffles. An acute sanious discharge from the nose should be cultured for diphtheria. It is useful to remember that a nasal infection, such as found in an ordinary cold, may give a high temperature.

*Mouth.*—Scars or ulcers on the lips or in the corners of the mouth are suggestive of syphilis, or are the remains of previous exanthematous diseases. Late teething may occur in the breast-fed and may be of no significance. It is one of the less important symptoms of rickets. Early crumbling of the teeth, in some cases at the time of eruption, indicates a hypoplasia due to rickets. Saw-tooth edges in the primary teeth

are unimportant. Tonsillitis is rare in babies under a year, as is faucial diphtheria. Difficult deglutition, hoarse or constant crying occur in syphilitic infants.

*Chest.*—The abdominal, superficial and irregular types of respiration are normally seen in infants. Recession of the chest wall is seen in dyspnea from congenital stridor, diphtheritic laryngitis, cardiac disease, asthmatic bronchitis. Hyperpnea or air hunger is found in the acidosis of intestinal and other intoxications. A monograph could be written on grunting respiration in infancy. When physical signs of pneumonia are present, grunting fits into its clinical picture. Grunting in the absence of pneumonic signs and with abdominal distention brings up the question of an obscure pulmonary or abdominal lesion. And then we have the sick infant who grunts with a nasal obstruction, with pain or tenderness at each respiratory effort. Some of these cases are puzzling.

Deformities of the chest are not always due to rickets, but may be congenital or from chronic respiratory embarrassment. Arching of the back and retraction of the head is seen not only in meningitis but sometimes in marasmus where it is due to hypertonus of the back muscles. The legs in marasmus are flexed on the abdomen and are not retracted as in the opisthotonos position.

*Abdomen.*—Pot-belly is an accompaniment of rickets. A child with such an abdomen is usually constipated. The average child, however, who is said to be constipated has usually a soft stool, but suffers from obstipation, a distinction which is not recognized until attention is called to it. A protruding abdomen develops in the runabout that has flat foot, atony of the back muscles and semiflexion of the knees.

*Genitals.*—Of frequent occurrence is the ulcer of the meatus in boys. This may result in a few drops of blood or in a crust formation which shows no tendency to heal. It is an accompaniment of ammoniacal urine and intertrigo. Vulvovaginitis is frequently overlooked in infancy; smears should be examined and the character of the infection determined. The urine as a source of the trouble should be considered.

*Percussion.*—It is well to remember that percussion in children must be light. From experience one can detect change in resistance to the touch on percussion. There is room for the development of a very acute ear and sense of touch in percussion of the small thin chest of infants.

*Auscultation.*—Because of feeble respiratory sounds and shallowness of breathing, one is sometimes at a loss to know whether the breath sounds are absent, as in empyema. One sometimes hears what he regards as bronchial breathing but finds it absent the next time he listens.

The tracheal and bronchial element is more noticeable in an infant because those structures are nearer the surface in a child. This pseudo-bronchial breathing is heard at the apices in front and interscapularly. The writer believes that an opinion formed while listening to the lungs is apt to be changed at a subsequent examination. The asthmatoïd wheeze as described by Chevalier Jackson is of value in recognizing the presence of a foreign body in the bronchus. Bronchophony (D'Espine's sign) cannot be employed at this age, except when the child is crying, and then it is not satisfactory.

Few organic acquired heart murmurs are heard in infancy; one is usually dealing with a congenital or functional murmur.

The temperature is best taken at the close of the examination if the child is excitable. According to Holt the temperature in healthy infants varies from 98 to 99.5. The mistake is frequently made in assuming that 100 or higher is always normal for the rectum.

*Urine.*—We have found some specimens of urine unreliable for examination, especially those which are low in solids. A mixed urine is more apt to show characteristics. Catheterization of girls is safe and advisable, especially for microscopic purposes. The application of a collecting tube is sufficient in boys. Urine collection is not impossible in any child. The textbook of the future will probably lay much emphasis on the frequency of pus in the urine, especially of girl infants. We have recently seen a pyelitis in a 3 weeks old boy.

*Blood.*—Cell counts have the same diagnostic value in infancy as in adults. One should familiarize himself with the changes peculiar to infant blood. The technic of blood collection for Wassermann is not always easily carried out in fat babies.

900 Rialto Building.

#### THE RELATION OF THE PROCTOLOGIST TO GROUP DIAGNOSIS\*

W. H. STAUFFER, M.D.  
ST. LOUIS

The experience of military service has rendered thousands of physicians familiar with methods of organization and accustomed them not only to the treatment of individual patients but to coordination of work with other doctors. The return of these physicians to private life should be the occasion for stimulating the organization of medicine. Group medicine is a necessary progressive step.

The solution of the diagnostic problem lies in team work, each member of the group possessing special skill in some particular kind of work. Specialism, cooperating as a unit in-

stead of acting as a disintegrating force, may be made to contribute to a higher unity, most helpful, both to the public and to the profession. Such a system does not restrict any specialist to a single unit, but he may participate in several groups. Examination by every member of a unit is necessary in most cases. The general diagnostic survey of the general practitioner is very different from the problem of the specialist in a single domain. The general practitioner surveys the patient as a whole organism, the specialist as a small part of that organism.

The making of a diagnosis, whether by a general internist or by a specialist, involves the application of the methods of reflective thought to the solution of a problem. Practice and study should not be warped by a biased point of view. A comprehensive history of each patient should be obtained by a physician and in no event should this task be delegated to an office attendant or a trained nurse. This is necessary in order to merit confidence and co-operation. The findings should be carefully tabulated by each specialist and should not be communicated to the patient until the diagnosis is completed and the line of treatment definitely outlined. Observing this caution will prevent the making of neurotics.

Unfortunately for the patient the lower bowel has been sadly neglected and to not a few physicians remains an undiscovered but fertile field for information as a diagnostic factor. A nosological and incomplete physical examination of the rectum is the rule rather than the exception. A few illustrations taken from my records will serve to emphasize the value of finding the weak link.

CASE 1.—Mrs. H., aged 57, consulted me March 31, 1912. Had been treated for neurasthenia for eighteen years. Complained of pain in the rectum and frequent loss of blood. The removal of hemorrhoids and fissures resulted in a satisfactory restoration to health in a few weeks. No examination of the rectum had ever been suggested.

CASE 2.—Mrs. E., aged 47, was referred to me by Dr. B., Nov. 28, 1914. A continuous loss of blood from the lower bowel and her marked anemia demanded immediate interference. The blood count showed 40 per cent. of the normal. The removal of internal hemorrhoids, and proper hygienic conditions sufficed to start her on the road to restoration. This patient had been treated in Boston and New York City for anemia, but no examination of the parts had been made.

CASE 3.—Mr. C., aged 47, was referred to me by Dr. B., Nov. 28, 1914. Said patient had been treated by a gastrologist with temporary relief. An examination of the lower bowel revealed pus in abundance, but diligent search failed to find any foci of infection. With the permission of Dr. B., I referred him to a rhinologist, who found both antrums filled with pus. The proper treatment of this condition was all that was required.

CASE 4.—Mr. B., of Mobile, came to St. Louis in March, 1917, to consult a well known orthopedist who at that time was a loyal member of the A. E. F. He next consulted Dr. M., an internist of note, for the relief of rheumatism. Dr. M., desiring to complete his diagnosis, referred him to me for examination. The

\* Read at the Sixty-Third Annual Meeting of the Missouri State Medical Association, Jefferson City, April 6-8, 1920.



excision of three pus pockets from the rectum, and proper eliminative treatment made it possible for Mr. B. to return to his home without the aid of crutches within ten days from date of operation.

The above illustrations could be multiplied many times but I trust those outlined will serve to remind you of the importance of a complete examination before giving your patient a diagnosis on which can be based intelligent treatment.

University Club Building.

#### DISCUSSION

DR. DAVID S. BOOTH, St. Louis: In regard to the examination referred to by Dr. Stauffer, I wish to make some additional remarks. The doctor mentioned the necessity of a thorough clinical examination, and especially the subjective symptoms. He did not refer to the cases I thought he was going to refer to—cases that give no subjective symptoms whatever. Several cases that I have had under my care, some of which Dr. Stauffer treated, gave no symptoms whatever; some who did have subjective symptoms denied them. One case especially was a doctor who had epilepsy. After covering the body as thoroughly as I knew how, with the aid of other specialists, and finding no lesion, I suggested that he have a rectal examination although he had no symptoms referable to the rectum. I heard nothing of the case for three years when I met the doctor at a medical society meeting and in reply to a question as to how he was, he said he was all right; that he had consulted the essayist who found a rectal ulcer, had treated it, and he has had no attacks since.

Another case, a double sciatica, which gave no symptoms pointing to the rectum and no apparent cause for the pain, was referred to a rectal specialist who told me he found the largest ulcer he had ever seen in the rectum; after treating it I believe he recovered.

These are only two of a number that might be cited. We should be on our guard even when patients do not have subjective symptoms. We often find lesions in different parts of the body which do not give subjective symptoms. The rectum is one and some patients, especially women, object to having anything done in the rectum. I have had them absolutely deny any symptoms referable to the rectum; one such case, who finally had to acknowledge rectal symptoms, was in such a condition that immediate operation was found necessary.

DR. RALPH W. HOLBROOK, Kansas City: I think any pain or discomfort the patient complains of in the entire left side of the abdomen should lead to a rectal examination. So many cases do not complain of local discomfort at all. It is surprising to see the number of cases that the gastro-enterologist has referred to him for gastric ulcer in which only a small intestinal ulcer or small fistula is entirely responsible, and particularly the cases that used to come with a reference from their doctor for a splenic area involvement in which a small sigmoidal ulcer is found and when removed all symptoms disappear.

DR. W. H. STAUFFER, closing: I want to thank Dr. Booth for alluding to two points I had failed to cover. I want to emphasize in closing that practically every patient should have a real examination of the lower bowel before definitely concluding the diagnosis. It will justify what I have said and many of our chronic invalids will be your most grateful patients.

DR. W. D. HAMMOND, St. Louis: Dr. Stauffer, permit me to say that in most cases of pruritis about the genitals we make it a routine to have a proctologic examination, as most of these conditions seem to arise from some pathological condition in the rectum.

#### OBSTRUCTION OF THE COLON WITH REPORT OF CASES\*

OLNEY A. AMBROSE, M.D.  
ST. LOUIS

In order to arrive at a correct diagnosis it is essential that we, as clinicians, have a good working knowledge of the anatomy of the human body, and especially does this hold good when dealing with those organs that are not confined in a fixed position. Prior to the advent of the roentgen ray we were compelled to rely on either our anatomic knowledge as gleaned from the dissecting room or operating table. The position of the different movable internal organs, when visualized, is quite different from what we formerly thought them to be. Consequently, I want to review briefly the anatomy of the large intestine.

It extends from the cecum in the right iliac fossa to the beginning of the rectum in the pelvic cavity and it is 5.5 feet long, usually. Its widest part is the cecum and it generally narrows from there until it reaches the lower end of the pelvic colon. Its position in the abdominal cavity differs, depending on the build of the individual, the state of muscular development and the amount of adipose tissue. This is well demonstrated by those of ptotic habitus. While it may be stated that the colon normally arches around the small intestines the coils of which lie within the concavity of its curve, those segments of the bowel that are completely enveloped by peritoneum or that have mesentery are subject to very marked variations in their disposition. The cecum, instead of lying in the right iliac fossa, may be found in the right lumbar region, sometimes as high as the under aspect of the liver; or it may hang down into the pelvic cavity. The transverse colon, which normally arches across the abdomen in the upper part of the umbilical region, frequently drops downward as a U or V shaped loop, reaching sometimes to the pubes and thus increasing the shortness of the angles at the hepatic and splenic flexures. When distended with gas it may rise in front of the stomach. The pelvic colon also varies considerably in length and position. It may form a short horseshoe shape loop of not more than 6 or 8 inches, or it may be two or three times as long and be thrown into several curves, assuming an S or inverted U shape. The ascending colon, splenic and hepatic flexures, and the descending and iliac portions, are more constant in their positions as they are not completely enveloped by peritoneum and are to some extent fixed to the posterior abdominal wall. It is necessary, therefore, that the above be kept in mind when making either a physical or roentgen-ray examination of the colon. I make it an unvarying rule to apply systematically the methods

\* Read before the St. Louis Medical Society, May 4, 1920.

of physical diagnosis to each and every patient and to check the results with the symptomatology, the roentgen ray and laboratory findings. This gives me as complete a picture as can be expected.

Due to the fact that the cases I expect to report are mostly of chronic obstructions, I shall confine what I have to say to that subject and will leave out volvulus and congenital defects. The cecum and sigmoid and their immediate vicinity are the most frequent locations for chronic obstructions. This is due to their bearing the brunt of the work of the colon which consequently subjects them to a great deal of trauma from within.

I will first call your attention to the fact that the symptomatology of the majority of obstructive lesions of the colon is very indefinite and misleading in the beginning. The symptoms are usually referred to the stomach, the patient complaining of either gastric distress or that so frequently met with gas pain, associated with other vague digestive upsets, running the scale all the way from sour stomach and belching to vomiting, but rarely ever do they in the beginning complain of severe pain. As the obstruction progresses the pain becomes more severe until the condition becomes an acute one, at which time pain is the dominating feature. If we are to save these patients from chronic invalidism and, in many cases, their lives, it is necessary to make a diagnosis before the obstruction reaches its terminal stage. How frequently do we see cases of carcinoma of the large bowel that could have been saved, or life prolonged, or made comfortable by an early resection. The patient and physician are equally responsible for this omission. The physician makes his mistake in failing to make a careful and complete examination of the individual and allows his attention to be directed to the symptoms only, which, as I stated a moment ago, are in the beginning usually referred to some other part of the body. The patient is responsible in his failure to apply early for relief. The great majority of these cases can be positively diagnosed in the beginning if a painstaking investigation is made. The fluoroscope makes this possible long before the physical signs and symptoms make themselves sufficiently well known to call your attention to the true condition. The symptoms of chronic obstructive lesions are so gradual in their appearance that we can very easily be misled, unless we are in the habit of making a complete routine examination in every case. After the obstruction is complete, or sufficiently so to cause the usual obstructive symptoms, the diagnosis is comparatively easy, the only difficulty being location of the obstruction. The general symptoms of chronic large bowel obstructions are similar; yet each pathologic condition will present features peculiarly its own. There are, however, a few clinical symptoms that are char-

acteristic of any chronic lesion. Pain, at first moderate, is always present but not specific in character as to location of obstruction. Vomiting, which is a constant symptom usually in acute intestinal obstruction, is rarely ever seen. The pulse is not rapid and there is an absence of toxemia. All the above are quite the opposite of acute obstructions. Permit me to enumerate the most common causes of chronic obstructions and to state briefly their individual signs and symptoms.

*Tuberculosis.*—Most frequently met with in the cecum or its immediate vicinity. Ileocecal tuberculosis differs from other manifestations of this disease in that it is not destructive. We have here a great diminution in the lumen of the bowel with numerous villous processes and shriveling of the ileocecal valve. This condition is usually seen in patients between the ages of 20 and 40 with slight if any evidence of pulmonary involvement. It may occur, however, at any age. It is very insidious in its onset and for months the only symptoms are indigestion, so-called, some loss of appetite, discomfort of varying degrees in the right iliac fossa and frequently mistaken for chronic appendicitis. Later the symptoms are emaciation, weakness, frequent attacks of griping pains, coming on usually two or three hours after meals, alternating constipation and diarrhea, at times visible peristalsis and loud intestinal rumbling. This may be followed, and frequently is, by a period of complete relief. If the condition goes further, a palpable swelling is detected in the right iliac fossa, usually tender and slightly movable, patient may have blood in stool, but not always. Tubercle bacilli are very rarely found in the stools. The reaction to tuberculin is very unsatisfactory and there may be absolutely no evidence of pulmonary involvement. Inoculation of the guinea-pig may or may not be positive.

*Fibromatosis.*—A condition frequently found in the colon resembling very much carcinoma, both clinically and macroscopically. Undoubtedly, some of the cures reported of malignant growth following colostomy were fibroid instead of malignant. Any part of the colon may be involved but most frequently the sigmoid and rectum. The affected portion of the bowel is changed into a firm, rigid tube. The microscopic examination will differentiate. This condition is usually found in patients over 40 with a history of illness very similar to that of a malignant obstruction. They have habitual constipation with periodic attacks of diarrhea which are generally brought on by taking strong purgatives. They rarely have a bowel movement unless something is given to produce it; stools may or may not contain blood and mucus; there is a persistent abdominal pain. If in the rectum and sigmoid, the sigmoidoscope will show marked thickening of the mucosa with excessive rugosity. On physical examination



a swelling is palpable, tender on pressure, provided it has reached a sufficient stage for these signs to be detected.

*Benign and Malignant Tumors.*—Multiple adenomas spring from the mucous membrane and show a marked tendency to become malignant. They are to be distinguished from the polypoid condition seen in ileocecal tuberculosis. Severe diarrhea is a characteristic.

*Carcinoma.*—Excluding the rectum, 95 per cent. of the cases of intestinal carcinoma are found in the colon. The tumor is, in the great majority of cases, the primary lesion, growths by metastasis being rare compared with cancer in other parts of the body. Carcinoma of the colon is less malignant and of slower growth, metastasis occurring only at a late stage. This does not, however, make it less serious.

*Adenocarcinoma.*—This is most frequently met with; we see it as a cauliflower growth, filling the lumen of the bowel, or the scirrhus type which slowly encircles the bowel, causing an annular stricture and which may completely occlude before ulceration takes place. The pelvic colon is the most common site for carcinoma. Next in order of frequency come the cecum, ascending colon, transverse colon, and splenic flexure, and lastly the hepatic flexure and descending colon. It is quite remarkable to what extent the colon may be narrowed by a malignant obstruction without giving rise to any symptoms worthy of note, the patient complaining only of what he terms indigestion until the sudden onset of acute obstruction. Alternating constipation and diarrhea, with the constipation becoming more marked following each attack, is rather characteristic. The shape of the stool is of no importance unless the growth involves the anal canal. Blood is detected by chemical examination but hemorrhage is rarely ever seen. Strangulation by bands and adhesions, extra intestinal pressure, are other causes that may produce narrowing of the bowel, the patient complaining of recurring attacks of abdominal pain which is usually treated for constipation. The symptoms may so closely resemble fecal impaction that a differential diagnosis becomes quite difficult. The roentgen ray will show the point of obstruction in both instances. In the fecal impaction the obstruction is not complete and, if looked for at hourly intervals after the patient has been given hypodermics of sodium sulphate, will be seen to change its location, whereas, if due to other obstructive causes the point of obstruction remains the same. The physical examination in the above conditions is usually negative in so far as any outward change is concerned. Chronic constipation and obstipation are frequently mistaken for intestinal obstruction. These patients suffer over a period of years with severe attacks of abdominal colic at times with great depression, vomiting, loss of weight, etc., and are habituated to purgatives. The form that is usually mistaken

for intestinal occlusion is the spastic. The physical examination is negative in so far as the abdomen is concerned. The roentgen ray will show the true condition. I have seen a number of these patients who had been advised to have an immediate operation for acute obstruction.

The treatment of all organic obstructions of the colon is surgical. In the majority of cases it is curative if done early, the mode of procedure to be determined by the surgeon who should be in close touch with the internist who has compiled the data.

This is a broad subject and I have undoubtedly omitted a number of important facts but I have presented the paper more along the line of data collected from my own experience. Some cases are reported:

Mrs. W., widow, aged 40, mother four children. Family history, negative. Past history, measles, chickenpox, pertussis, menses regular, no miscarriage, normal pregnancies. Present history: Epigastric distress, i. e., sour stomach, belching of gas, epigastric tenderness, coming on anywhere from one to four hours after eating. Badly constipated; has to take physic; will go a week without a bowel movement. Feels good when bowels are moving freely but states it now requires very large doses of Epsom salt to produce a stool; bowel movements are always liquid. For quite some time has been having severe abdominal colic with vomiting. The first time I saw this patient she had so many symptoms of an acute intestinal obstruction that I insisted on immediate removal to hospital. She refused, saying she had always recovered from the attacks and felt so well in the interval that she did not need an operation. Physical examination: Well nourished and of good musculature. Heart and lungs o.k. No epigastric rigidity or palpable masses. Liver and spleen negative. In the lower left quadrant and in line of the descending colon there is a palpable thickening on deep pressure, especially in the region of the sigmoid. Not painful on pressure. Proctoscopic examination did not reveal anything of moment. Fluoroscopic examination: Barium enema arrested at the sigmoid and is seen to trickle through a tube-like passage, the balance of the colon filling normally but slowly and under considerable pressure; patient complains of discomfort during filling of descending colon. Barium by the mouth reaches the descending colon in twenty-four hours and there is marked dilatation beginning in the transverse colon and extending down to the sigmoid where there is marked narrowing with very little passing through.

This patient was under my observation for about two years, steadfastly refusing surgical relief. She died from a complete obstruction of the colon just above and involving the sigmoid. Postmortem findings: The abdomen was opened directly over the descending colon which was found to be greatly thickened and a large, thick tumor mass which began just above the sigmoid and involving the same. On opening the colon, this growth was found to have almost completely occluded the same. Pathologic examination proved this growth to be fibroid in character. This was consequently fibrosis of colon. No evidence of malignancy either microscopically or at necropsy.

Mrs. M., aged 60; mother of four children; menopause at 49. Family history, negative. Past history: Grippe a year ago. Typhoid twenty-five years ago. For several years been having stabbing pain under the left costal angle, with abdominal distention, loud intestinal rumbling, poor appetite for years; passing gas per rectum gives relief. General health good. Has marked constipation requiring physic and enemas. No vomiting. Present history: Three weeks before I first saw her was suddenly seized with severe griping

pain at night in the region of splenic flexure. Abdominal distention at first relieved by enemas and colon tube. Bowels moved freely after taking a saline with complete relief for about forty-eight hours, attacks coming always at night and with increasing severity. Relieved only by morphia. Physical examination: Heart and lungs negative. Pelvic organs negative. Teeth in very poor condition, most of them absent. The abdomen is soft and flabby between attacks. Very tender on pressure in the region of spleen and descending colon. No growths palpable. Rectum negative. Fluoroscopic and radiographic examination shows a marked narrowing and an arrest midway between sigmoid and splenic flexure. Colon dilated above cecum. Feces mixed with mucus, no blood. Urine negative; indican not increased. Operation one month after first severe attack by Dr. Tupper disclosed a large band in the region of sigmoid which was gripping the colon very tightly. Patient made a complete recovery and has been in good health for the past two years.

Comment: There was nothing found at operation to account for band.

Mrs. W., widow, aged 29, mother of one child. Family history, negative. Drinks a great amount of coffee; beer once a day. Past history: Menses irregular; two misses. Denies lues; hemorrhoids three years ago. Present history: Seven months ago began with sudden attack of pain in the epigastrium followed by nausea and vomiting. The distress became general with abdominal colic and was acutely ill for two days. Prior to the above attack had not complained with the exception of constipation. These attacks would be followed by a period of two weeks relief but they are becoming more severe and now has marked visible intestinal peristalsis with loud rumbling. Appetite good, but afraid to eat on account of epigastric distress. Losing weight. Physical examination: Poorly nourished. Abdomen distended, visible peristalsis in region of cecum. A mass can be felt on deep pressure. There is marked tenderness in the region of the umbilicus and descending colon. Pressure made over the descending colon upward causes pain in the right iliac region. Heart and lungs negative. A very careful examination both radiographically and clinically did not reveal any lesions in the lungs. Fluoroscopic examination shows a marked dilation of terminal ileum. This persists for twenty-four hours and requires forty-eight hours for the barium to pass into the large bowel. A barium enema is arrested just above the cecum. Urine and feces do not show anything abnormal. Stools are o. k. with the exception of a very heavy reaction for indican. An ileocolostomy by Dr. A. R. Kieffer was done with Murphy button. The entire cecum and terminal ileum consisted of a hard mass studded with tubercles. Pathologic report tuberculosis. Patient was entirely freed of pain and had normal bowel movements following operation and lived for four months. The cause of death was a general tuberculous infection of the glandular system.

Comment: This patient was treated for several months for intestinal indigestion.

Mr. E., aged 59, stone cutter. Family history, negative. Smokes cigars excessively. No alcohol. Past history: Malaria, bilious attacks. Present history: Up to five weeks ago had been in apparent good health although his wife stated he had a poor appetite and looked pale. Was suddenly seized with severe colicky pain in the region of the cecum. This pain followed the course of the colon, with marked rigidity of abdominal muscles. The attack lasts about six hours and is completely relieved by passing gas per rectum followed by a blood tinged stool. No vomiting and patient states he has never been constipated. A few days later was again seized with a similar attack while drinking a barium mixture preparatory to a fluoroscopic examination. A fiftieth of a grain of atropin was given hypodermically without relief, pain becoming so severe that morphia was required.

Fluoroscopic examination shows an obstruction in the immediate region of the sigmoid. Examination of feces both microscopically and macroscopically, blood present. Stools liquid. Urine, negative; Wassermann, negative. Physical examination shows a fairly well nourished man with general abdominal rigidity most marked in midline and below the umbilicus. Pressure over lower abdomen causes pain. No growths palpable through abdomen. Breath very offensive and tongue badly coated.

For several days following the first roentgen-ray examination he periodically had attacks of abdominal colic. On the fourth day his abdomen rapidly became board-like, patient suffered severe pain in the umbilical region radiating to the sigmoid. He rapidly developed all the symptoms of an acute obstruction which necessitated an emergency colostomy by Dr. Willard Bartlett. There was nothing further done at this time as the patient's condition did not warrant it. Following this procedure the acute symptoms rapidly subsided and he continued in comfort, gaining in strength and weight until at the end of two months it was decided to do a radical operation and, if possible, remove completely the obstruction and close the colostomy opening. Through a midline incision an exploration was made when it was found that we were dealing with a malignant condition of the descending colon and sigmoid. Metastases were everywhere in evidence. Consequently, nothing further was attempted. This patient lived for several months.

Charles H., aged 19, single, farmer. Family history: Father, mother living and well. Past history, negative, does not use tobacco, alcohol or coffee. Present history: For the past six years has been badly constipated, requiring physic to produce bowel movement. For the past year has been having periodic attacks of severe headache, nausea, at times vomiting, with severe abdominal colic which would not be relieved until he had gotten a complete evacuation of his intestinal tract. He never has anything but a liquid stool. Now requires large doses of salts to produce bowel movement. Between attacks he complains of much gas with belching, marked hyperacidity and frequent colicky pain, especially in the region of the umbilicus. Has lost 20 pounds in weight in six months. His appetite remains good but he is afraid to eat on account of the gastric distress. On several occasions the above symptoms became so severe that his physician advised an immediate operation for intestinal obstruction. Physical examination: Well-muscled and fairly nourished, teeth good, tongue coated, considerable tenderness on pressure in the region around the umbilicus. No evidence of hernia, very marked splash sound over the stomach region; anus and rectum negative. No thickening or masses could be made out anywhere. Stool and urinary analysis negative. Blood examination negative. Wassermann, negative. Fluoroscopic examination: A barium enema completely fills the entire colon without any visible defect or arrest. He is of a ptotic type, consequently the transverse colon and stomach are in a lowered position. On observing the colon for ten minutes, it was seen to contract visibly and at the same time the patient complained of pain. A barium meal by the mouth on the following day did not elicit anything of importance. Barium remains in the colon for seventy-two hours. Diagnosis: Spastic constipation and intestinal stasis.

Comment: This patient was placed on an anti-constipation diet, abdominal massage, regulated exercises and at first nightly injections per rectum of olive oil. His improvement was very marked almost from the beginning and in a letter from his physician four months later he states that the patient has made a complete recovery; that he no longer suffers from the attacks and has normal bowel movements without the use of medicine. He, however, is careful of his diet.

Lister Building.



# THE JOURNAL

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## Missouri State Medical Association

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### EDITORIALS

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#### RENAL GLYCOSURIA

It is very probable that in times gone by most practitioners made a positive diagnosis of diabetes mellitus in every case in which a glycosuria was found on two occasions. And it is also very probable that a few of these glycosurias were not diabetes at all, but were instances of that interesting condition known as renal glycosuria, a condition which was formerly called renal diabetes. The increasing number of cases reported indicates that renal glycosuria is not as rare as the authorities on diabetes have believed. This statement is corroborated by the recent experience of Allen, Wishart and Smith, who found no less than three instances of renal glycosuria among forty cases of supposed diabetes.

The increase in the number of cases reported is directly traceable to an increase in the number of cases studied by blood chemistry methods; for in no other way can a diagnosis of this condition be made. The best definition of renal glycosuria it seems at present is, a glycosuria more or less constant, not markedly affected by the carbohydrate content of the diet, and accompanied by a normal percentage of blood sugar. The causation of this condition is unknown. It has not yet been proved that the abnormality lies in the kidney, nor that the condition consists merely in a lowering of the normal threshold of sugar excretion. In fact, the sugar output "seems to be determined by the supply of available carbohydrate, especially performed, and also, to a less degree, by the potential carbohydrate of protein." In the cases studied by Allen and his co-workers no fixed relations were observed between the blood sugar and the urine sugar; nor was there observed any fixed relation between sugar and water elimination. These cases have usually no symptoms of diabetes other than the glycosuria, and they do well on a carbohydrate diet. They suffer no disturbance of health except as a result of severe dietary restrictions necessitated by an attempt to stop the excretion of

sugar, which restrictions are not indicated. The prognosis is good.

It becomes our duty, therefore, to give every patient who has a glycosuria the benefit of thorough study of the blood sugar under various dietetic conditions, before we make a diagnosis of diabetes mellitus and thereby subject him to the hardships of a diabetic diet or rejection for life insurance.

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#### AMERICAN CHILD HYGIENE ASSOCIATION TO MEET IN ST.

#### LOUIS

In the program of any large public organization—religious, philanthropic, educational, or even political—there is at least one "plank" held in common and on which all are agreed, and that is the importance of public health. Our own draft experience in the recent war and the experience of England, who found in 1918—to quote an eminent statesman—that she was "a nation of C men," awakened the world to the importance of what a few of us medical cranks have been preaching for years. While some attribute the chief factor in our physical deterioration to venereal disease, others to tuberculosis, etc., each according to his individual hobby, there is one thing to which all agree and that is, that the basis of all public health work lies in the proper hygiene and education of the child. In this connection the meeting of the American Child Hygiene Association at St. Louis on October 11, 12 and 13, is of particular importance. The American Child Hygiene Association, although an organization of all persons interested in child hygiene, has been fortunate in having its policy directed by a group of medical men who have been interested in this work. Too many of the public welfare movements in recent years have lost much of their value in not having intelligent professional guidance. Starting a number of years ago as The Association for the Study and Prevention of Infant Mortality the work of the organization has gradually shaped itself to cover the entire field of the health of the child from conception to adolescence, and for that reason the name was changed to its present one in 1918. The coming meeting, which will be the first one that the Association has held in the Southwest, will be of great interest to physicians interested in obstetrics, pediatrics and public health, and a well rounded program covering the various phases of the subject, has

been prepared and appears on another page of this issue.<sup>1</sup>

In close association with this meeting is the meeting of the Central States Pediatric Society which meets in St. Louis on October 13 and 14—the meeting on October 13 to be a joint meeting with the American Child Hygiene Association. The Central States Pediatric Society is one of the newer hustling young specialty societies with a membership extending from Buffalo to Denver and from Wisconsin to Texas. Organized a few years before the war it survived that struggle with added strength. In the Middle West where the number of specialists in a given subject is too few to encourage the formation of state specialty societies, the formation of societies along the lines of the pediatric society is worthy of further development. The program is furnished at each meeting by the members residing in the city where the meeting is held and is essentially practical in character. It is a meeting to which the members go to see rather than to hear what is being done. The two meetings together offer a most unusual opportunity to the physician who is interested in any one of the multiple phases of child hygiene or public health.

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#### MENS SANA IN CORPORE SANO

These are the days of transitions. Fortunately, humanity, rendered pliant by evolution, has become accustomed to the rapid changes which come on us, oftentimes overnight, and has come to regard these alterations of custom in a decidedly stoic manner. In this same spirit we approach the field of education where more than in any other branch of man's utilitarian endeavors we have run almost through the entire gamut of transitions. Placed formerly on the pedestal of caste and special privilege we now find education descended to the level of the masses seeking as never before since the fall of the Bastille to respond to the community needs of the lower classes. One avenue through which education has manifested an interest in the health of her postulants has been through the development of physical training—we dislike the term, "physical culture" since it smacks of things hypocritical and mercenary and is abhorred by leaders in physical education. This branch of education holds the stage today in no uncertain manner since mankind has come to recognize systematic physical training as a necessary adjunct of civil or military life.

In the past, man was accustomed to live and thrive by the labor of his hands and the sweat of his brow; but today we find him shirking anything that partakes of drudgery, hence we have evolved huge and marvelous machinery, economic disturbances, and autotoxemia. We are not surprised therefore to hear now and then of colleges and universities running along the categorical diapason in an effort to place this branch of education in its proper status for the body politic of students that it may reach all; which was not the case in the past. The latest institution to effect a change in this direction is Northwestern University, which announces that there will be substituted the class system for the competitive method of before. This should prove an interesting experiment for observation, since heretofore it was the leaders in athletics who were continually in the limelight and received all the benefits to be derived from the training plus the chauvinistic outpourings of adolescent admiration from their fair coeds.

Such a system was manifestly unfair since it denied the benefits of physical education to those most in need of the systematic exercises, who were by common consent relegated to the scrap heap of college life with the additional injury of the dreaded cognomens of "grinds," "hams," "slugs," and other epithets entirely devoid not only of esthetics but of consideration besides. This new arrangement of the curriculum should also solve the problem with which nearly all prominent faculties were confronted in the past, namely, that of the student who "passed through" college or university by virtue of having the "corpore sana," and who under the new arrangement will no doubt be discouraged from matriculation.

Many will feel perhaps that with the passing of the keen sportsmanship aroused by the old competitive methods and the intensity of college spirit manifested as a result, there will be lost to the colleges and universities a strong advertising feature; but our sense of the proportion of things mundane consoles for this doubtless potential loss with the thought that affection for alma mater in these institutions will be ancillary to a logical conception of the true value of one's relation to the institution that fitted him with the prowess to engage in life's terrific struggle; and therefore there will result a more stable and integral devotion exceeding in our estimation by far the rah-rah sort. We suspect very strongly that there will also be found more time for actual study of the things essential in the preparation for life's embarkation than has hitherto been possible. On the whole, the new system is bound to be accepted eventually by

1. Page 391.



all stable institutions of learning if the success attendant on its inception in the public school systems of the country be of any criterionic value.

### ST. LOUIS LAGS BEHIND

Let us take it for granted that you as a physician are not only interested in your practice but in the welfare of St. Louis, and that the problems peculiar to your town receive considerable attention from you. You may have remarked on the condition of certain streets and the state of the tenement quarters, the inadequacy of the street car service, and the lack of a number of things, noted by you in other cities, but absent in your own. And you may have expatiated to friends on how reforms could be effected if only your advice were followed; and your friends may have listened to you patiently or, if of a different view, impatiently. No doubt you thought that the reforms you had in view covered the whole field or at least were the reforms most urgent at the time you expatiated on them. But no matter what your interest in these vital matters were, you were just as human—meaning imperfect—as all men are, just as blind to what was absolutely in need of your help, just as limited in your survey of the problems which really were the ones that should be solved at once so that a better reputation would accrue to your city. Assuming the premise then, that you, despite your interest in reforms, are guilty of having overlooked what to us is a most important one, we are taking the liberty of calling your attention to the fact that the city of St. Louis has no Home for backward children, whether municipal or of a private nature.

Every city of the size of St. Louis has its quota of backward children who are in great need of those ministrations which a Home run on proper lines could give them. These children bear within themselves hidden qualities—undeveloped qualities—which only extraordinary patience and a thorough knowledge of child-nature can bring to the surface. Even where the child is fortunate enough to be in surroundings which indicate luxury, the proper teacher is not always forthcoming—the teacher equipped to develop the child and make of him or her something better than neglect has effected or than has obtained through the care and solicitude of parents, no matter how kindly they may have been, or through the efforts of nonspecialized teachers, no matter how unremitting the efforts may have been. But every child is not fortunate enough to have surroundings which may add to its well being, and, in extraordinary

circumstances, be just the surroundings to bring about that change in the mental growth of the child that one would desire. There are many children in St. Louis who at present are so situated that they receive not even the kindly if misguided offices of sympathetic parents and teachers, who grow “physically” from year to year, and “mentally” not at all. These are the children who need a Home such as we would desire them to have and such as every city of the size of St. Louis and even smaller should have: a Home with teachers who have made a special study of the backward child, who are specialized teachers by nature and by education, and a Home where through the right sort of discipline the child minus may have a chance to evolve into a useful member of society.

In the *St. Louis Star* of recent date there appeared an interview with Mr. J. P. Smith, chief probation officer of the Juvenile Court, on the care of the backward child and how deficient St. Louis was in not having a Home where the surroundings and training would be of benefit. Mr. Smith's pertinent remarks and our own recent experience on behalf of one who was in need of attentions which, by reason of her rather sordid environment, were not forthcoming, and our vain attempts, after many inquiries, to find a Home to harbor the child, awakened us to the fact that we have been just as remiss as the physician we have pictured above, who thought he had envisaged all the problems which were crying at present for reform. Surely, a city that neglects its young, especially when the young need its help, is a city still steeped in darkness and is groping not toward light but backwardly into the fastnesses where light never penetrates.

That a new phase—one that shall bring honor to the city—is about to be effected so that no longer will St. Louis bear the opprobrium of lagging behind in the matter of having a home for backward children, for the care and treatment of the tuberculous, the feeble-minded and curable insane and infirm, is instanced in the weekly meetings of the Commission that has in hand the matter of the final disposal of the \$1,100,000 that have been voted by the citizens of St. Louis in the recent bond issue for the purpose of housing these unfortunates. No one who has given thought to the subject since the bond issue can possibly gainsay the worthiness of this charity, and no one after the first steps are made clear to him can be aught but interested in the earliest fruition of the plans which the Commission is at present debating for the welfare of a class of unfortunates hitherto neglected.

## CHILD WELFARE COMMITTEES, ET AL.

Exactly 100 years ago was born the noted evolutionist and English philosopher, Herbert Spencer. In the course of his brilliant career he had occasion to inform the English-speaking peoples that they were devoting more attention to their hogs, horses and cattle than they were giving to their school children. If he were living in Missouri today he could repeat the assertion in all veracity and remain perfectly consistent with present day conditions in our state. The fact that the majority of the states in the Union are guilty of the same negligent attitude toward their young in no way releases Missouri from the necessity of recognizing the handwriting on the wall, and getting busy accordingly. The commonwealths in general are quick to grumble about "state rights"; and yet it is only too evident that the federal government is the militant factor today in propaganda looking toward the welfare of young America.

A league of nations does not seem to be a very tangible factor as yet, therefore it is well to remind the people of our state that we had best look to the physical welfare of our young so that we be not caught napping in this regard, as was the case when Old Glory was viciously assailed with a very unpromising ensemble to defend her honor. In this connection, one cannot help cogitating the fact that our soldiers showed very poor resistance even to the mildest diseases en route to camp and while in camp. These things all belong to the past; the record is closed; the book is sealed; but since we learn from our experiences of the past it is well that we remember. All of which leads up to our subject of child welfare committees in Missouri.

When the first welfare committee was appointed several years ago we wondered just why the organized medical profession of the state had been omitted from the active units of this group of prominent men and women of recognized sociologic ability; particularly, because the Missouri State Medical Association is able through its component societies to reach into every nook and cranny of the state. This year we note a like appointment with a similar omission. *Noblesse oblige!* Which, adapted to our present point of contention, would signify: our state medical association not having received any recognition by representation on this committee incurs the obligation of remaining silent. However, we are wondering whether the child welfare committee would not have been a trifle more successful in obtaining proper

child legislation if they had given us the privilege of helping. In justice to the last committee, let it be acknowledged that they were fairly successful in having some statutes enacted, but several important ones were simply permitted to demise in the regular manner; due, we suspect, to lack of persistent hammering which is so essential in eliciting any interest from legislators who are subject to attacks of inertia where the public health is concerned; a symptom that we imagine is more feigned than actual.

Missouri lawmakers do not differ very markedly from others the world over in that they require continual pressing for action before motivation actually commences; and this must be persisted in most tenaciously before action is definitely obtained. Where this constant energetic and aggressive importunity is relaxed legislators are only too prone to fall into the ways of the physiocratic economists in France, whose motto, inscribed in languor, runs: "*Laisses faire, et passer le monde va de lui-meme*"; which translated literally reads, "Let alone; the world revolves of itself!" It is only too evident that the child of Missouri has been the victim of this dormant complacency by our legislatures in the past. Medicine and sociology have always worked hand in hand; and to separate them where the child is concerned is a grievous error.

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## HOSPITAL CLOSES DOORS TO FEE SPLITTERS

The reprehensible practice of fee-splitting has not disappeared from the ranks of the profession, but the men who are thus addicted cannot escape the stain indelibly stamped on their characters, and sooner or later the external symptoms become so manifest that he who runs may read. Like the leper of old, these people defile all whom they touch. The American College of Surgeons has established what is perhaps the most drastic regulation governing the behavior of their Fellows in this respect; if that regulation can be faithfully enforced, the college can make the practice so disgraceful that he would be a bold Fellow indeed who would attempt defiance of the rule. An added weapon against the fee-splitter is developing through the recent movement toward grading hospitals, the first instance of which has just come to our notice through the action of St. Lukes Hospital in St. Louis. This action effectually closes the doors of that institution to the fee-splitter. A communication from Dr.



M. B. Clopton, acting secretary of St. Lukes Hospital Staff, conveys the information that the staff recently adopted the following motion by unanimous vote:

"It is moved and seconded that the staff of St. Lukes Hospital is absolutely opposed to the division of fees in any form whatsoever, and we desire to recommend to our Board of Directors that the use and benefits of St. Lukes Hospital be denied to any physician or surgeon known to practice 'fee-splitting.'"

The staff furthermore ordered a copy of the resolution sent to every hospital in St. Louis with an invitation to take similar action. At this writing several hospitals have notified Dr. Clopton that the staffs had adopted a similar regulation.

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#### WILLIAM MARION REEDY: AN APPRECIATION

No doubt you have known men who were intellectual and whose endeavors in the field of journalism were commendable, and no doubt you have admired them for their intellectual gifts but at the same time have stood in awe of them. William Marion Reedy, although intellectual and a journalist of the first rank, did not inspire awe in those less gifted than he, for his modesty was such that the little arrogancies which may have attempted to see the light of day were completely overwhelmed. The superstructure of his mind was not made up of fads and fancies, of literary affectations and conceits, but had the solidity of the ashlar on which it rested. These ashlar were not of silt and sands, but of solid rock; they were square and of goodly size; they were held together by a cement that defied the inroads of years. But more than all this: they gave to the superstructure of his mind the strength and solidity which were inherent in them. Hence the man who has recently died and who breathed into American journalism that something which is indefinable yet is necessary to keep it alive.

The man who makes books leaves something to posterity besides remembrance, but the journalist, no matter how brilliant, leaves only remembrance. His work is ephemeral; it is written for the moment; it is flat and uninteresting in most instances when it is separated from the moment. Fortunately for all journalists of the first water, remembrance generally endures for some time, and even though posterity reaps no benefit from their lives, those who are of the same generation profit to no small degree. The maker of books may have great advantages over

the maker of phrases that are read today and forgotten tomorrow, but he lacks one advantage which is a great advantage, and that is, he never is cheek-by-jowl with his public as is the journalist who is esteemed. In short, the lordly yacht of the maker of books invariably keeps adrift from the masses, whereas the meanly sloop of the journalist touches barge after barge in friendly salute and in the spirit of good fellowship.

In the case of William Marion Reedy, his journalism was for the people at large, not for the elect who worship sanely at times and insanely at times at the feet of a literary idol, who only too often turns out to be common clay instead of Parian marble. His words were for that larger democracy which knows no bounds: for the kind and the gracious, for the poor and the downtrodden; for those who fought the battle of life and lost and for those who are fighting the battle of life and are not any too successful. But though his heart beat for the "common" people, he had no hatred of the rich or of those who basked in the splendors of fame. His nature was too big for hatred and rancor; his regard for the least demonstration of intellect too genuine and his view of things too embracing to exclude anyone who added his mite to the welfare of the world or dazzled on account of the glamor that radiated from a well-earned celebrity. Such was William Marion Reedy, the man and journalist, and such will be the remembrance of all those who were fortunate enough to know him or who felt they knew him because of their intimacy with his writings in the paper he builded so well—*Reedy's Mirror*.

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#### BOOKS FOR LEISURE MOMENTS

*Reading with discrimination broadens the mind  
and strengthens the mental grasp*

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Chesterton's book on divorce, "The Superstition of Divorce" (John Lane Company, New York), is just the sort of book one would expect from the modern will-o'-the-wisp of English literature. This author knows how to write—of that there can be no two opinions; his mind is a rare mind even in these days when many minds of unusual equipment have been incited to better work by the world question emanating from the new thought incident to the awakening following the Great War; his "stand" in all the questions of the day is about the most individualistic "stand" of any supe-

rior mind writing today, now that Shaw has lapsed into a state of comparative quietude. We read Chesterton because he has always something to say of a refreshing nature, and we quarrel with him because at times, despite his brilliance, he is too medieval to fit in with what we moderns expect of one who, on most subjects, is in the vanguard of reformers. Three subjects he invariably treats in a manner that harks back to the Middle Ages—marriage, divorce and religion. His views on marriage are not to be decried, for their sanity is an asset of no mean worth in his arguments for the sanctity of the bond; but his views would be much more convincing if he would entirely drop his medieval point of view and look the matter squarely in the face. The same point of view obtains in connection with his arguments against "easy" divorce, or for that matter any divorce whatever, and also when he berates all moderns for a too inquisitive mental attitude opposite religious subjects. In a word, the Chesterton mind has two distinct phases—the modern and the medieval. This is shown decidedly in the book under consideration, for page after page indicates its modernity and then its medieval cast. As physicians, we know that in circumstances which we need not mention here, divorce is not an unreasonable proceeding, and that at times it is imperative if the health of the wife is to be preserved. Chesterton overlooks the medical side of the question altogether—in fact, if his attention were brought to it, we are quite sure he would sniff in his most characteristic manner and exclaim: "Poppycock." That is just what a medieval mind is capable of when the medical phase of any subject is introduced in an argument, for the men who controlled thought in the Middle Ages had scant respect for medicine; and those who still wrap their modern minds in the shreds of that period are almost as lacking in their regard. Remembering these peculiarities of Chesterton while reading this book will help the reader in assuming a kindly attitude toward the idiosyncrasies of one who always has something to say of an unusual nature, and whose sonority of phrase and audacity of thought are always alluring. No doubt, the reader will throw this book aside at times in disgust, and then on account of his liking for Chesterton pick it up again and read on, and be a staunch admirer of the author until his medievalism again crops out. This has been the experience of the reviewer; and it is a compliment to the author to revert to his pages even after a quarrel, for it indicates the grasp this brilliant man has on all readers who can

forgive him his idiosyncrasies and thereby attune their minds to his freshness, his keenness and his unforgettable incisiveness.

P. S.

Admirers of Swinburne will rejoice in Coulson Kernahan's "*Swinburne As I Knew Him*" (John Lane Company, New York), not because the book is the equal in size and importance of Gosse's "*Life*," or "*Swinburne's Letters*," but because the 108 pages are written as only a friend and intimate could have written them—one who had only kindness for mental defects and charity for decidedly human failings. The drunkenness of Swinburne has been mentioned before, as well as his astounding eccentricities, but in no other book on Swinburne is the sympathetic note so well expressed nor can we find a better description of the long friendship between Watts-Dunton and the poet. The sketches in this book are mere sketches and the moralizations are lacking, and just because they are we have a clearer and more distinct picture of the poet's inner life. What Swinburne would have done without the daily ministrations of Watts-Dunton, himself a poet with a clear understanding of the vagaries which beset poets much more frequently than they do writers of prose, cannot be conceived, for with a mental make-up such as was Swinburne's it was absolutely necessary for him to have a guardian. The poet never grew up, always remained a child in some matters, and was as irrational at times and as petulant as most children are before they outgrow their animalism. This does not mean that the poet was a subject for the sanatorium or that his eccentricities were so abnormal that the accusation of sex perversion can be brought against him. But as a member of any household, no matter whether the congenial arts of liberty hall were in force or a less loosely disciplined system of keeping house, his capers would have led to many misunderstandings and many misconceptions. A rebel in the sense that his mind was always in revolt against authority that spelled oppression of the people at large, an iconoclast of the poetic thought distilled by Tennyson and his followers, a free-lance whose genius changed the placid features of Victorian poetry and wrenched the poetic art completely from its moral moorings and defiantly shouted immorality from the housetops, not in approval, but in the hope of destroying the Tennysonian yoke—who would or could harbor so strange a manifestation as this in surroundings which bespeak order and discipline and a sense of duty



to society. Added to this unusual bent of mind, Swinburne, just as in his poetry which is a thing apart on account of the verbiage—myriad-hued, dazzling, excessive—was an incessant talker at times and on the slightest provocation would lash himself into a storm of words that held his admirers spellbound but not seldom deprived him of his physical strength for hours. It was Watts-Dunton who at such times knew how to manage this almost unmanageable man-child, and who by persuasion brought the poet back to quietude and rest. After reading "Swinburne As I Knew Him," we should rejoice that the independence of his ways led him away from his relatives, and that good fortune placed him in the hands of Watts-Dunton, for had it been otherwise the world today would be poorer by poetry which, despite its faults, has given us glimpses of vistas wherein sounds may be heard that make us forget the smallness and monotony of everyday prose. P. S.

Sherwood Anderson is a name to conjure with, and it would be well for readers of American fiction to remember his name. In "Winesburg, Ohio" (B. W. Huebsch, New York), there are collected a series of stories of a small town each of which is a distinct picture of life as it really is in all small towns in this country—humdrum, and on account of its humdrumness accompanied by distorted views of life and a degree of unmorality altogether different from the flagrant immorality of our large cities. There will be those who will say that Sherwood Anderson sees only one side of life and that he exaggerates this side's dark lights, rarely, if ever, relieving the picture by mentioning the high lights; and there will be those who will denounce his point of view altogether and who will even accuse him of gross immorality. But there will be those—perhaps only a few—who will at once recognize his worth as a literary artist and who will sing his praises. Each of the sketches is connected with the preceding or succeeding one, the same characters to a great extent appearing in a large number. In this respect the book resembles "Spoon River Anthology," but not only in this respect: in the matter of giving American readers a new "thrill" it bears a family resemblance to Master's work. The "thrill" is in each story, and invariably it is the outstanding moment of the story—the moment when the whole course of life is changed for the character depicted. Although it has just been stated that Sherwood Anderson is a literary artist, it must not be

thought that he is a "finished" writer in the sense that his literary style is above reproach, but rather that, on account of repression and a total absence of moralizations, he is an artist in his way, which is a highly commendable way, for his photographs are so clearly made that the reader can at once visualize the psychology of each character and understand the motives which prompted the character to act just as he or she did. In "Death" and also in "Godliness," to mention only two of the sketches, we have the author at his best, that is, the artist here shows his truest stamp of artistry. But all the other sketches are far above the mark of "good"; in fact, are of the sort which makes one wonder why this author is not more widely quoted. Let it be understood that these sketches are not for the reader inured to the flabby conventionalities of the routine story in our many weeklies and even in our monthlies, but for the men and women—especially the men—who can appreciate a literary gift of undoubted value that is not ashamed to look things in the face without blanching, and that gives a photograph of what it observes in the fewest words possible and yet with a strength that drives the photograph into one's inner consciousness, there to remain as a remembrance of engrossing and outstanding moments in the matter of one's readings. P. S.

## NEWS NOTES

DR. MURRAY C. STONE of Springfield has been appointed pathologist of Frisco Hospital in that city.

THE people of Columbus, Mo., are very anxious to have a physician locate in that town. It is a good farming community near Warrensburg, the county seat of Johnson County. Inquiries may be addressed to Anderson Brothers, Columbus, Mo.

THE *Indian Medical Record* offers a prize of £10 for the best article on "Tuberculosis, Its Etiology, Prophylaxis, and Treatment," with special reference to the tropics. Manuscripts should be addressed to A. C. Bisharad, Managing Editor, Indian Medical Record, Calcutta. The contest is open to any physician.

STATE HOSPITAL No. 4, at Farmington, recently acquired a farm of 100 acres adjoining Farmington. This gives this institution an aggregate of 1,350 acres of land under its con-

trol. This large acreage is beneficial to the state financially, and affords healthful, congenial outdoor life to the 800 mentally ill patients at this hospital.

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THE Physicians and Surgeons Laboratory of Omaha, Neb., announce that Dr. Nicholas M. Alter has taken charge of the histopathological department of the laboratory. Dr. Alter was formerly in charge of the pathological laboratories of the Howard A. Kelly Hospital and later associated with the pathological department of Harvard University.

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THE twenty-fifth annual meeting of the American Academy of Ophthalmology and Otolaryngology will be held in Kansas City, Mo., October 14, 15 and 16, at the Hotel Muehlebach. The local members of the Academy and their friends are making arrangements to give all those who attend a pleasant time. Physicians engaged in these specialties are cordially invited to attend.

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FRIENDS of Dr. Leo C. Huelsmann, formerly of St. Louis, will learn with much gratification that he has fully recovered from a tuberculous infection that compelled him to abandon his practice in St. Louis and live in the West. At present Dr. Huelsmann is located at Colorado Springs, where he is engaged in active practice of his profession, limiting his activities to the treatment of tuberculous persons.

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A REVIVAL of activities in the postgraduate meetings will be observed during the winter months, and councilors are invited to encourage the societies in their districts to begin planning for the meetings. Dr. A. H. Hamel of St. Louis, councilor of the Twentieth District, has begun arrangements for a postgraduate meeting at St. Louis early in November. To this meeting all members of this Association will be invited. Further announcement will be made in the October JOURNAL.

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WE take pleasure in announcing the first insertion of two new patrons of our advertising pages, the Marshalltown Laboratories, Marshalltown, Iowa, and Sanborn Company of Boston, Mass. The Marshalltown Laboratories are makers of "Cellosilk," a nonadherent, transparent and sterilizable dressing, said to be more satisfactory than gutta-percha, oiled silk or rubber tissue. The Sanborn Company, the

well-known makers of scientific instruments, invite our attention to the Benedict Metabolism Apparatus. We are glad to announce also that the Victor Electric Corporation, and Mead Johnson & Company have resumed their regular space after a temporary suspension during the summer months.

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THE following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Armour and Company: Tablets Anterior Pituitary, 5 grains; Tablets Ovarian Substance, 5 grains.

Hynson, Westcott and Dunning: Lutein, Sterile Solution of Ovarian Residue-H. W. D.; Tablets Ovarian Residue-H. W. D.

Merck and Company: Benzyl Benzoate (Merck).

Organic Salt and Acid Company: Benzyl Benzoate (Organic Salt and Acid Company).

Seydel Manufacturing Company: Benzyl Benzoate (Seydel).

E. Fougere and Company: Riodine.

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THE interest in graduate teaching and instruction on the part of the practicing physician is shown by the success which attended the first course in pediatrics given by the Department of Pediatrics of the Washington University Medical School in St. Louis. There were thirteen in attendance at the course given last May. A second course has been announced for four weeks beginning September 20, as advertised in the JOURNAL of this issue. Before this course had been announced five physicians had registered for the course "whenever it should be given this fall." It is interesting to note that these all registered as a result of the personal recommendation of men taking the course last spring. The experience in pediatrics would seem to show that there is a need and a demand for proper thorough courses for the general practitioner in the Southwest and every effort should be made by St. Louis and Kansas City to arrange for proper graduate courses.

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THE Missouri State Board of Health conducted an interesting exhibit at the State Fair, August 14-21, which was visited by a very large number of people seeking knowledge on the prevention of disease, the care of children, and the improvement of hygienic conditions. Venereal diseases and their ravages, prenatal and postnatal care of the mother, infant feeding and child hygiene, typhoid prevention, and



other phases of the protection of the health of the people, were emphasized. Many placards were exhibited showing sickness and death rates from preventable diseases, especially venereal diseases and infant mortality, and numerous pamphlets on these and other subjects were distributed. A gratifying interest was very manifest among the large number of persons, old and young, who visited the exhibit, showing that the people are learning that the health authorities of the state can be of real service to them in the matter of protecting their health. The following were in charge of the exhibit: Division of Vital Statistics: Dr. George H. Jones, director; Miss Mary Halloway. Division of Venereal Diseases: Dr. R. L. Russell, director; Mr. J. U. Endicott, Miss Ruby Russell, Miss Dolly L. Hew, Miss Effie Gill. Division of Child Hygiene: Dr. C. P. Knight, director; Dr. Viola Russell, Miss Katherine Luby, R.N.; Miss Nellie Heinzelman, R.N.; Miss Emma Brown, R.N.; Miss Margaret Duffey, R.N.; Miss Estelle Lindley.

## MEMBERSHIP CHANGES, AUGUST

### NEW MEMBERS

Bitter, Carl, St. Charles.  
Bowline, Benjamin F., Tipton.  
Bryant, Jewel Auburn, Steele.  
Graft, John H., St. Marys.  
Graham, John A., 329 Argyle Bldg., Kansas City.  
Gullett, Harry, Stephens.  
McWaters, William J., Bragg City.

### CHANGES OF ADDRESS

Armstrong, Minard J., Buffalo, to Mt. Vernon Sanitarium, Mt. Vernon.  
Baerens, Oscar F., 214 N. Sixth St., St. Louis, to 974 Arcade Bldg.  
Baldwin, Francis V., Forsyth, to Loveland, Colo.  
Barnes, J. N., 11 Pine Grove Ave., Long Beach, Calif., to 410 Markwell Bldg.  
Bolton, B. M., St. Louis, to New Samaritan Hospital, Sioux City, Iowa.  
Chaffin, Elizabeth B., Gainesville, Texas, to State Hospital, St. Peters, Minn.  
Glenn, Joseph E., St. Louis, to Walter Reed General Hospital, Washington, D. C.  
Heuston, Howard H., Craig, to Agra, Okla.  
Kennedy, Walter U., St. Louis, to 603 S. 14th St., New Castle, Ind.  
Larimore, Joseph William, 4418 Holly Ave., St. Louis, to 5086 Westminster Pl.

Miller, John J., 4439 Enright Ave., St. Louis, to 6255 Waterman Ave.

Penney, David L., 311 Wall Bldg., St. Louis, to 3701 Westminster Pl.

Phillips, Benjamin L., Paola, Kan., to Drexel, Mo.

Printy, Louis E., 316 Wall Bldg., St. Louis, to 3701 Westminster Pl.

Rhea, Clarence W., St. Louis, to Forney, Texas.

Robison, W. A., Transit House, St. Joseph, to 212½ Illinois Ave.

Soper, H. W., Wall Bldg., St. Louis, to 3701 Westminster Pl.

Taussig, Frederick J., 515 Wall Bldg., St. Louis, to 3519 Washington Ave.

Urquhart, Wilford H., Moberly, to Madison.

Webb, Leslie R., Bethany, to 742 Landers Bldg., Springfield.

Wheeler, William M., 412 S. Ohio St., Sedalia, to 502 S. Ohio St.

Williamson, J. William, Parchman, Miss., to Fort McPherson, Ga.

Youngman, J. Andrew, St. Louis, to Sappington.

### RESIGNED

Barnes, John Nelson, Long Beach, Calif.

### DECEASED

Dandurant, Louis J., St. Joseph.  
Garner, Kirby C., St. Louis.  
La Rue, Harry, Dexter.

ON June 14, 15 and 16 the following applicants were examined by the state board of health at St. Louis, and were licensed to practice in Missouri, all successfully passing the required grade:

Adelsberger, Bransford L., Waterloo, Ill.  
Aldrich, James T., Dudley, N. C.  
Andrae, Robert Lee, St. Louis.  
Barker, Paul Shirmer, St. Louis.  
Batson, Oscar Vivian, St. Louis.  
Bernstorff, Paul Hammond, St. Louis.  
Braden, David Richey, Amsterdam, Mo.  
Brass, John George Beadle, Sioux City, Iowa.  
Breedlove, Lenin Roger, Champaign, Ill.  
Callaway, Guy Drennan, Springfield, Mo.  
Carbaugh, Glenn C., Kansas City, Mo.  
Carlisle, John Bertche, Sedalia, Mo.  
Carroll, Grayson Lewis, St. Louis.  
Carter, William Stokely, Trenton, Ill.  
Cassidy, Leslie Denis, Macon, Ga.  
Champlin, Paul Bertrand, Canton, Kan.  
Dailey, John Eugene, Terre Haute, Ind.  
Donohue, Philip Francis, St. Paul, Minn.  
Dreiling, Bernard John, Victoria, Kan.  
Ebel, Joseph Anthony, St. Louis.  
Elz, Jule Theodore, St. Louis.  
Etter, Forrest Stayton, Eldon, Mo.  
Evans, John Lane, Brookfield, Mo.

Ewell, George Hobert, Carrollton, Mo.  
 Flowers, John Azerre, St. Louis.  
 Gallagher, William Joseph, Cleveland, Ohio.  
 Gianotti, Ernest F., St. Louis.  
 Goldman, Alfred, St. Louis.  
 Grant, Samuel B., St. Louis.  
 Haile, Leon Campbell, Farmington, Mo.  
 Halleck, Paul Parker, St. Louis.  
 Harbrecht, Sebastian James, St. Louis.  
 Hassett, Henry Anthony, Pittsfield, Ill.  
 Henske, William Conrad, St. Louis.  
 Holt, George Washington, Nashville, Tenn.  
 Hopkins, Guy Huskinson, St. Louis.  
 Hudson, William Andrew, St. Louis.  
 Jeffries, Roy Randolph, St. Louis.  
 Jostes, Frederick Augustus, St. Louis.  
 Kaylor, Orville Kenneth, St. Louis.  
 Kennedy, Patrick Harlan, St. Louis.  
 Kennedy, Robert Walden, Sweet Springs, Mo.  
 Kerper, Alver Hubert, Dubuque, Iowa.  
 Lohrentz, Abraham M., Moundridge, Kan.  
 McGrath, John Newton, St. Louis.  
 McKee, Joseph Wallace, Kansas City, Mo.  
 Mantz, Herbert Leslie, West Plains, Mo.  
 Marshall, Alice B. C., St. Louis.  
 Martin, Donald David, Seward, Ill.  
 Maurer, Frederic George, Lima, Ohio.  
 Meyer, Herman Moses, Linneus, Mo.  
 Miles, Charles Henry, St. Louis.  
 Monaghan, Willis A., St. Louis.  
 Moss, Merton Carl, St. Louis.  
 Murphy, Frank Edward, St. Louis.  
 O'Donnell, Francis Joseph, St. Louis.  
 O'Neill, John Rudolph, St. Louis.  
 Owen, Leonard Joseph, Colorado Springs, Colo.  
 Peterman, Mynie Gustav, Merrill, Wis.  
 Polk, George Merritt, Bushong, Kan.  
 Potter, Lee George, Mountain Grove, Mo.  
 Rinaldo, Eugene John, St. Louis.  
 Rice, Carl Epler, Plainville, Ill.  
 Rutledge, John Frederick, Festus, Mo.  
 Schiek, Charles Melvin, Freeburg, Ill.  
 Schneiderman, Henry, Kansas City, Mo.  
 Schreiner, Eduard Olin, St. Louis.  
 Sexter, Elmer Edwin, Carlinville, Ill.  
 Sievers, Edward Faville, St. Louis.  
 Stanford, Vernon Bunn, Clay City, Ill.  
 Steward, Guss Byron, Bolivar, Mo.  
 Stoelze, Joseph Daniel, Murphysboro, Ill.  
 Tanner, George Silsby, Alcorn, Miss.  
 Titterington, Paul Francis, St. Louis.  
 Vogel, Edward Bernard, Upper Sandusky, Ohio.  
 Wallace, William Earl, Excelsior Springs, Mo.  
 Waller, Riley Moore, Faucett, Mo.  
 Walters, William Huey, St. Louis.  
 White, Harvey Lester, Jacksonville, Ill.  
 White, Marcus Demosthenes, Palmyra, Mo.  
 Wilhelm, Louis F. X., St. Louis.  
 Williams, John Webster, Milwaukee, Wis.  
 Williams, William R., Nashville, Tenn.  
 Wilson, Lucius Roy, Jonesburg, Mo.

At the same meeting the board licensed the following applicants by reciprocity:

Cahill, Charles J., Topeka, Kan.  
 Capps, Murl T., Pittsburgh, Pa.  
 Chiasson, Placid N., Rockport, Ill.  
 Dixon, Otto Jason, Kansas City, Mo.  
 Fees, Arthur Waldo, Blair, Neb.  
 Hazlewood, Varney, Rockville, Ind.  
 Hill, Elijah Vinson, Yarbrow, Ark.  
 Klepinger, Dayton P., Kansas City, Mo.  
 Myers, Benjamin Lee, Kansas City, Mo.  
 Nelson, Carl Ferdinand, Lawrence, Kan.

Nichols, Walter J., Asbury, Mo.  
 Oliver, Claudius Hansen, Randolph, Mo.  
 Reed, William W., Kansas City, Mo.  
 Smith, Benjamin Franklin, Southwest City, Mo.  
 Vaughn, Florian, Shelbyville, Mo.

## OBITUARY

### WILLIAM A. SWEARINGEN, M.D.

Dr. William A. Swearingen of Caruthersville, a graduate of the Barnes Medical College, 1900, died at Dawson Springs, Ky., May 4, of nephritis, aged 47 years. He was a member of the State Medical Association through Pemiscot County.

### HARRY LA RUE, M.D.

Dr. Harry LaRue of Dexter, a graduate of the Medical Department of the University of Louisville, 1897, died at his home, May 27, of cerebral hemorrhage, aged 52 years. He was a member of the Butler-Stoddard County Medical Society and State Association and for many years was local surgeon of the Iron Mountain Railroad Company.

### WILLIAM J. MAIRS, M.D.

Dr. William J. Mairs of Newtown, one of the oldest physicians in Sullivan County, died at his home, April 6, of carcinoma, aged 65 years. He graduated from the Louisville (Ky.) Medical College in 1878 and spent most of his life in Missouri. In 1917 he was elected a member of the house of representatives of the state legislature. He was a member of the State Association through Sullivan County, and a son, Dr. Edgar J. Mairs of Laredo, is a member of Grundy County Medical Society.

### LOUIS J. DANDURANT, M.D.

The death of Dr. Louis J. Dandurant of St. Joseph on August 1 is a distinct loss not only to the people of St. Joseph but to the medical profession of that city and of the state. He was a skilled physician, a generous friend, and a consistent supporter of the high principles governing the profession of which he was an honored member. The manner of his taking-off is a particularly tragical affair. At a place along the Missouri River near St. Joseph where the bank had caved into the stream, a part of the public road had been obliterated. Dr. Dandurant in company with his family and two friends was out driving Sunday evening, August 1. No warning had been posted on the highway to give notice of the washout nor any guide post at a detour which had been established through a field near the scene of the tragedy. There is no definite explanation of the accident, but



about 8:45 p. m., after following the course of the regular road, the car with all its occupants was precipitated into about twenty-five feet of water. Mrs. Dandurant and their 2-year-old daughter were rescued by the friend who also rescued his wife. The body of the doctor's son was found the following day, but no trace has been found of the doctor's body.

The funeral of the son was held August 9 at which time a memorial for the doctor was celebrated at the cathedral where Dr. Dandurant was a member.

A special meeting of the Buchanan County Medical Society was held August 9, at 8 p. m., at the Commerce Club rooms, St. Joseph, to receive the report of the committee appointed by First Vice President H. S. Conrad to prepare resolutions of respect on the death of Dr. Louis J. Dandurant of St. Joseph. The committee, P. I. Leonard, C. R. Woodson and A. L. Gray, presented the following:

WHEREAS, The members of the Buchanan County Medical Society have heard the sad news of the shocking death of Dr. Louis J. Dandurant and of his little son, on the evening of the first of August, 1920, therefore be it

*Resolved*, That the members of the Buchanan County Medical Society cannot express in words their profound feeling at this unfortunate, shocking and overwhelming catastrophe to one of their members, taken in the prime of life, depriving us of one of our most energetic and working members, while our community suffers the loss of a man who has devoted his life to the alleviation of suffering and the preservation of the health of our fellow-citizens. He was an enthusiastic physician, a student and constant reader of new scientific methods of practice and identified with every movement for the improvement of the people and the profession. As a citizen he took a lively interest in all the affairs of men and during the war he did his "bit" by entering the Army. His loss will be greatly felt in our community where he has practiced so many years, while the profession and the people feel deeply grieved at the passing of this good man.

The members of the Buchanan County Medical Society give this expression of their deep sympathy at the loss of the doctor's son and assure the wife that we share with her the irremediable loss of husband and son. Of Dr. Dandurant it can be truthfully said, "Well done, good and faithful servant."

His record is more enduring than one of marble, for it is written on the hearts and the lives of men and will endure for all time. On the face of the cliffs of time we will chisel the name of Dr. Louis J. Dandurant and beneath it inscribe the humble tribute, "He gave aid and comfort to his fellowmen."

"You may break, you may shatter  
The vase if you will,  
But the scent of the roses  
Will cling 'round it still."

On motion, duly seconded and carried unanimously, the resolution was adopted and ordered spread on the minutes of the society and a copy sent to Mrs. Dandurant.

## MISCELLANY

### HONORABLY DISCHARGED, MEDICAL CORPS, U. S. ARMY AND NAVY

Field, A. C., Kansas City.

Lyle, C. F., Boonville.

McCarty, G. D., Kansas City.

### PRELIMINARY PROGRAM, AMERICAN CHILD HYGIENE ASSOCIATION

The following preliminary program has been announced for the meeting of the American Child Hygiene Association at St. Louis on October 11, 12 and 13:

#### Monday Morning, October 11

##### OPENING SESSION

Opening Address by the President, Dr. Philip Van Ingen, New York.  
Reports of Affiliated Societies.

##### AFTERNOON SESSION

The Problem of the Expectant Mother in Rural Communities.  
The Unmarried Mother Before and After Confinement. Dr. Foster S. Kellogg, Boston  
The Nursing Wards in Maternity Hospitals.  
Dr. A. N. Greadlick, Associate Professor of Obstetrics and Gynecology, Yale Medical School, New Haven.

#### Tuesday, October 12

##### MORNING SESSION

The Problems and Treatment of Early Dental Defects.  
Dr. Thomas D. McCleave, Berkeley  
Discussion opened by Dr. Joseph S. Wall, Washington.  
The Mental Health of the Child.  
Dr. C. Edgerton Carter, Los Angeles  
Discussion opened by Dr. William C. Hassler, San Francisco.  
Standards and Methods for Health Work Among Children of Preschool Age.

##### AFTERNOON SESSION

Methods of Publicity in Health Education.  
Miss Sally Lucas Jean, New York  
Heart Disease in School Children.  
Dr. Charles Hendee Smith, New York  
Economy of Preventive Measures in the Nutrition of School Children.

Miss Lucy H. Gillett, Boston

#### Wednesday, October 13

##### MORNING SESSION

Prevalence and Management of Tuberculosis in Infancy. Dr. Theodore C. Hempelmann, St. Louis  
Discussion opened by Dr. May Michael, Chicago  
How Can a Public Health Nurse Organize and Conduct Infant Welfare Clinics Especially in Rural Communities?

Miss Zoe La Forge, Washington, D. C.  
Discussion opened by Miss Minnie H. Ahrens, Chicago.

Boarding-Out vs. Institutional Care of Infants.

Dr. Florence Mabel Holsclaw, San Francisco  
Discussion opened by Dr. Henry Chapin, New York; Dr. Alfred Hess, New York, and Miss Caroline Crosby, Minneapolis.

## AFTERNOON SESSION

## Round Table Conferences

Directors of State and City Hygiene Bureaus.

Dr. Anna E. Rude, Washington, D. C., chairman  
Nurses. Miss Winifred Rand, Boston, chairman  
Rural Health Problems.

Mrs. Ruth A. Dodd, Columbia, S. C., chairman.

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1920

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH  
HAVE PAID THE STATE ASSESSMENT FOR  
ALL THEIR MEMBERS)

Webster County Medical Society, Dec. 1, 1919.  
Madison County Medical Society, Dec. 2, 1919.  
Livingston County Medical Society, Dec. 31, 1919.  
Schuyler County Medical Society, Jan. 9, 1920.  
Benton County Medical Society, Jan. 23, 1920.  
Camden County Medical Society, Jan. 28, 1920.  
Linn County Medical Society, Feb. 24, 1920.  
Ralls County Medical Society, March 8, 1920.  
Ste. Genevieve County Medical Society, March 17,  
1920.  
Atchison County Medical Society, March 26, 1920.  
Chariton County Medical Society, April 6, 1920.  
Cass County Medical Society, April 7, 1920.  
Clinton County Medical Society, June 15, 1920.

### HOLT COUNTY MEDICAL SOCIETY

The Holt County Medical Society met at Maitland, Thursday, July 15. Dr. George Osborne, who recently located in Mound City and engaged in the practice of medicine, was elected to membership.

Dr. A. L. Gray of St. Joseph read a paper on "Abortion, Miscarriage, Management and Treatment." Dr. T. M. Paul also of St. Joseph delivered an address on "Pyuria." Mr. Collison of Maitland gave a talk on "The Red Cross Nurse," and Dr. W. S. Wood of Oregon addressed the society relative to the work of the Salvation Army in Holt County. The work of both the Red Cross Nurse and the Salvation Army was considered an advancement in the right direction and when resolutions relative to the indorsement of these movements were brought before the members for action they were adopted.

The following attended from other county societies: Drs. Bell and Wallis, Maryville; Drs. A. L. Gray, T. M. Paul, Floyd B. Spencer and Willard C. Proud, St. Joseph.

The next meeting of the society will be held at Craig, October 7.

JOHN F. CHANDLER, M.D., Secretary.

### WRIGHT-DOUGLAS COUNTY MEDICAL SOCIETY

The Wright-Douglas County Medical Society met in Norwood, August 5, at 2 p. m., Dr. J. A. Fuson presiding. The following members and visitors were present: R. M. Rogers and J. A. Fuson of Mansfield; R. A. Ryan and L. T. VanNoy of Norwood; A. C. Ames and H. U. Daugherty of Mountain Grove; R. M. Norman of Ava; H. G. James of Rippee, and A. L. Anderson of Springfield.

Dr. Anderson gave an address on "The Diagnosis and Treatment of Heart Disease, with Special Reference to Auricular Fibrillation," in which he brought out many points not generally thought of on the subject. His treatment of the subject was so well appre-

ciated that the society tendered him a vote of thanks for his efforts.

Dr. Norman read a paper on "Intestinal Obstruction," in which he dealt more especially with functional obstructions from fecal impaction, and reported some cases in which the humorous side of the subject was not overlooked.

Dr. Ryan read a paper on "Scarlatina," in which he reported a case with the rare complication of a suppurative arthritis or osteitis, with separation of an epiphysis. The papers were discussed by several members.

The subject of fees was then discussed, and in view of the general increase of prices it was deemed just and reasonable that medical fees should be readjusted in proportion. The following committee was appointed to prepare a revised schedule of fees to present at the next meeting: J. A. Fuson, chairman; R. M. Rogers, R. A. Ryan, H. U. Daugherty, R. M. Norman and B. E. Latimer.

The meeting adjourned to meet in Mansfield on Thursday, November 4, at which time the annual election of officers will take place.

A. C. AMES, M.D., Secretary.

## BOOK REVIEWS

**SYMPTOMS IN THE DIAGNOSIS OF DISEASE.** By Hobart Amory Hare, M.D., B.Sc., Professor of Therapeutics and Diagnosis in the Jefferson Medical College of Philadelphia, etc. Eighth edition, thoroughly revised. Illustrated with 195 engravings and 9 plates. Philadelphia and New York: Lea and Febiger, 1920. Price, \$6.

The eighth edition of the "Diagnosis of Disease" deals exclusively, comprehensively, and consecutively with the clinical symptoms, objective and subjective, as can and should be elicited by the clinician at the patient's side.

Laboratory and pathologic findings are not included, although they are assumed to be available and contributory or confirmatory to a diagnosis. Hare emphasizes a point which too many physicians and surgeons overlook: that there is a "method whereby a recognition of symptoms will lead to a diagnosis." Such method every clinician should endeavor to attain. For obscure diagnoses are often obtainable, under systematic methodical observations although miles from laboratory, pathologist, or roentgen-ray machine.

In the introduction Hare voices the keynote of his system by stating that "the objective symptoms seen by the physician, the subjective symptoms described by the patient, and the so-called physical signs, elicited by auscultation, palpation, percussion and mensuration, are to be joined together in forming a diagnostic view of the case." Care and thoroughness in the procedure are emphasized, features in diagnosis which in the end save time and approach precision. These points are specifically noted in such a phenomenon as "difficult swallowing," where in case of a possible aneurysm a bismuth meal would be safer to start with than the introduction of a bougie, which might locate but injure the presenting mass.

Such, in a word, is this system of diagnosis. And beginning with the skin of the face it ends with the nervous system, including the physical signs and phenomena manifest by every tissue and organ in the body. One's attention is called to the minutest detail of change from normal which may suggest any organ or function disturbed. Negative signs are stressed in differential diagnosis, and the circumstances and environment of the patient are noted, as well as any personal peculiarities or habits. All such may contribute materially to a diagnosis.



Hare places special attention on the art of questioning a patient and the attitude and manner assumed by the clinician in the presence of the patient, be such an adult or child.

Undoubtedly, Hare's method, if followed, will prove a valuable training for any clinician and assist materially in arriving at earlier and more correct diagnoses. The fact that the 1920 edition is the eighth demonstrates the popularity of the work and the size of only 500 pages adds greatly to its value. The illustrations are few and pertinent. S. P. C.

**A DIABETIC MANUAL FOR THE MUTUAL USE OF DOCTOR AND PATIENT.** By Elliot P. Joslin, M.D., Assistant Professor of Medicine, Harvard Medical School, etc. Illustrated. Second edition, thoroughly revised. Philadelphia and New York: Lea and Febiger, 1919. Price, \$1.75.

"There is no satisfaction in treating ignorant diabetics," writes Dr. Joslin in the preface to the second edition of this book. Every physician with experience will say "Amen" to that, and it may well serve as the manual's motto. The book was written to put into the diabetic patient's hand a simple explanation of the nature of the disease and the modern method of treating it, in order to secure his intelligent cooperation. There are one or two other similar publications obtainable but none in any way comparable to this one. It is written by the one man best fitted by the combination of scholarship, experience and simplicity of style, to do it. The reviewer has used the book for two years and can attest its practical usefulness when given to patients. The new edition has been "revised, condensed and simplified." Aside from its value to the patient, if we were asked to name one account of diabetes for the general practitioner to read, this is the volume we would select. L. C.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1920, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**POLLEN ANTIGEN-LEDERLE (FALL TYPE).**—A liquid obtained by extracting equal parts of the pollen of ragweed, goldenrod, wormwood and maize. Each cubic centimeter contains 14,000 pollen units (a pollen unit is the equivalent of 0.001 mg. of pollen). This liquid is made into fifteen different dilutions. The product is supplied in packages containing the fifteen dilutions (to be used for prophylactic treatment), in boxes containing five of the dilutions (series A, B and C, respectively), and in packages containing a single tube (for diagnostic use). Lederle Antitoxin Laboratories, New York.

**WHOLE OVARY-H. W. D.**—The ovarian gland of the cow, including the corpora lutea, freed from extraneous matter and dried in vacuo. For actions and uses, see general article on Ovary (New and Nonofficial Remedies, 1920, p. 201). Whole Ovary-H. W. D. is sold in the form of 5 grain tablets only. Hynson, Westcott & Dunning, Baltimore.

**BENZYL BENZOATE-ABBOTT.**—A brand of benzyl benzoate (see New and Nonofficial Remedies, 1920, p. 49) complying with the N. N. R. standards. It is also supplied in the form of Elixir Benzyl Benzoate-Abbott and Benzyl Benzoate Tablets-Abbott 2 grains. Abbott Laboratories, Chicago.

**BENZYL BENZOATE-FRITZSCHE.**—A brand of benzyl benzoate (see New and Nonofficial Remedies, 1920, p. 49) complying with the N. N. R. standards. Fritzsch Brothers, Inc., New York.

**BENZYL BENZOATE-MERCK.**—A brand of benzyl benzoate (see New and Nonofficial Remedies, 1920, p. 49) complying with the N. N. R. standards. Merck & Co., New York.

**BENZYL BENZOATE—ORGANIC SALT & ACID CO.**—A brand of benzyl benzoate (see New and Nonofficial Remedies, 1920, p. 49) complying with the N. N. R. standards. Organic Salt & Acid Co., New York.

**AMPULES VEN-IRON CACODYLATE.**—Each ampule contains 0.03 gm. ( $\frac{1}{2}$  grain) of ferric cacodylate (see New and Nonofficial Remedies, 1920, p. 44). Intra Products Co., Denver, Colo.

**AMPULES VEN-IRON CACODYLATE.**—Each ampule contains 0.03 gm. ( $\frac{1}{2}$  grain) of ferric cacodylate (see New and Nonofficial Remedies, 1920, p. 44) in physiological solution of sodium chloride. Intra Products Co., Denver, Colo. (*Jour. A. M. A.*, July 3, 1920, p. 35).

**DIPHTHERIA TOXIN-ANTITOXIN MIXTURE (GILLILAND).**—Each cubic centimeter of diphtheria toxin-antitoxin mixture (see New and Nonofficial Remedies, 1920, p. 264) represents three lethal doses of toxin and approximately 3.2 units of antitoxin. Marketed in packages representing one immunizing treatment, and in packages containing ten treatments. Gilliland Laboratories, Inc., Ambler, Pa.

**GNOCOCCUS GLYCEROL-VACCINE (LEDERLE).**—A suspension of killed gonococci in a vehicle of glycerol and physiological solution of sodium chloride. For a discussion of gonococcus vaccine, see New and Nonofficial Remedies, 1920, p. 283. Marketed in packages of fifteen vials containing progressive amounts of the vaccine (*Jour. A. M. A.*, July 17, 1920, p. 177).

### PROPAGANDA FOR REFORM

**ACRIFLAVINE G H AND PROFLAVINE G H.**—Acriflavine and proflavine have been admitted to New and Nonofficial Remedies. However, the products sold by the Heyl Laboratories as "Acriflavine G H" and "Proflavine G H" have not been accepted for New and Nonofficial Remedies because (1) their quality did not conform to the Council's standards and (2) in the advertising issued for these drugs the manufacturer failed to give the unfavorable as well as the favorable clinical reports that have been published (*Jour. A. M. A.*, July 3, 1920, p. 51).

**ANTIDOTE FOR SNAKE POISON.**—No Anti-Venom for snake poison has been accepted for New and Nonofficial Remedies. Experiments looking toward the production of anti-venom for snake poisoning seem to have met with some success, but the use of these products in therapy is still in the experimental stage. In general it has been shown that an anti-venom prepared for one species is not always effective when used against the venom of another species (*Jour. A. M. A.*, July 3, 1920, p. 51).

**PRODUCTS OF THE AMERICAN ORGANOTHERAPY CO.**—Dr. Alfred A. Lowenthal has announced a "Post Graduate Course of Lectures and Clinics" to the physicians of Chicago, Denver, St. Louis, Columbus, etc., and incidentally brings to the attention of the medical world the alleged virtues of the products of the American Organotherapy Company. A few years ago, the American Animal Therapy Company of Chicago put out such products as Lymphoid Compound (Lowenthal), Ova Mammoid (Lowenthal) and Prostoid (Lowenthal), and these products were exploited to the public (*Jour. A. M. A.*, July 3, 1920, p. 49).

**ECHITONE AND ECHINACEA.**—A circular entitled "Skin Lesions of Unknown and Uncertain Origin" sent out by Strong, Cobb & Co. is devoted to the exploitation of "Echitone," stated to contain echinacea, blue flag and pansy. Several years ago, the Council on Pharmacy and Chemistry examined "Echitone" and rejected the product because unwarranted therapeutic claims were made for it and for other reasons. The drug echinacea has been claimed to be a "specific" for rattlesnake bites, syphilis, typhoid, malaria, diphtheria and hydrophobia. It has also been credited by enthusiasts with curative effect in tuberculosis, tetanus and exophthalmic goiter, and with the power of retarding the development of cancer. The Council on Pharmacy and Chemistry examined the claims made for this drug and reported that there was no reliable evidence in substantiation of the claims made for it. Echinacea is one of the many vegetable drugs introduced by the eclectics without a rational basis for their use (*Jour. A. M. A.*, July 17, 1920, p. 193).

**NA VERSUS K.**—Advantages of sodium over potassium salts: (1) *Rational therapeutics.* Sodium compounds are as efficient as, in many instances better than, the corresponding potassium compounds. Potassium is more toxic. (2) *National aid.* Accustom yourself to use sodium, an abundant natural product of the United States. The home of potassium is Germany, which, to its own commercial gain, popularized potassium drugs. (3) *Price.* Sodium salts are cheaper. Potassium is, relatively speaking, a foreign substance in the body. Potassium and sodium salts are prescribed mainly for the effects of the radicle they carry. It is illogical, therefore, to administer potassium acetate or potassium bromid when sodium acetate or sodium bromid can more readily be given. In spite of the smaller demand, sodium salts are on the whole cheaper than potassium salts and, should the medical profession prescribe the sodium more generally, all of those that might be used in medicine would be less expensive than the corresponding potassium salt (*Jour. A. M. A.*, July 17, 1920, p. 192).

**BORACETINE.**—Boracetine (F. E. Barr & Co., Chicago) in 1918 was heralded as "The Guardian of Health." It was claimed to be "an all-around antiseptic, especially good for pyorrhea, sore gums, sore throat, etc., excellent for cuts, bruises, insect bites, skin eruptions and, in fact, any condition when an efficient healing agent and germ destroyer is needed." It was also recommended to "get rid of that 'dark brown taste'." Indirectly Boracetine was also claimed to be a preventative of consumption, scarlet fever, diphtheria, etc. From the analysis made in the A. M. A. Chemical Laboratory it appears that Boracetine is nothing more wonderful than *Liquor Antisepticus*, N. F. with a dash of formaldehyd. The more "patent medicines" are analyzed the more obvious becomes the commercial wisdom of the nostrum interests in fighting formula disclosure. Secrecy and mystery are the "back bone" of the "patent medicine" industry (*Jour. A. M. A.*, July 17, 1920, p. 192).

**CHAULMOOGRA OIL IN LEPROSY.**—The results obtained with the treatment of lepers at the leprosy investigation station in Kalihi, Hawaii, with the ethyl esters from chaulmoogra oil have been encouraging. It will require, however, some time to determine whether a real cure for leprosy has been discovered (*Jour. A. M. A.*, July 24, 1920, p. 263).

**CHEMOTHERAPY OF TUBERCULOSIS AND THE "CERIUM SALT TREATMENT."**—Koch studied the effects of many chemical substances, including a gold cyanid compound, on the growth of the tubercle bacillus in cultures, and concluded that all these substances remained completely inactive when tested upon the tuberculous animal. Compounds related to guaiacol and creosote came to have a widespread reputation as tuberculocidal agents without any one's taking the

trouble to ascertain definitely whether they really had any particular capacity to injure tubercle bacilli in the test tube, the tuberculous animal or the consumptive patient, although the German manufacturing chemists provided innumerable proprietary derivatives of these drugs. Some time before the war, a "complex lecithin-copper compound" of unannounced composition was put forward in Germany. Another copper cure came from Tokyo, "cyanocuprol" of Koga. Other copper compounds, such as copper arspenamin, also were brought out. But none of these copper compounds have settled the tuberculosis problem. Recently newspapers have given publicity to the treatment of tuberculosis by the so-called cerium earth salts in France. It appears that a few observations have been made on the inhibitory action on the growth of tubercle bacilli of salts of cerium and some other rare earth metals. The inhibitory action was less than that observed in the past for the chemical substances, and there is no record of past experiments to determine their effect on experimental tuberculosis. Possible cerium earth salts help the tuberculosis; the evidence so far presented, however, is nothing to get excited about (*Jour. A. M. A.*, July 24, 1920, p. 246).

**MORE MISBRANDED DRUG PRODUCTS AND NOSTRUMS.**—The following products have been the subject of prosecution by the federal authorities under the Food and Drugs Act: Seelye's Wasa-Tusa, Dr. Seelye's Compound Extract of Sarsaparilla, Seelye's Laxa-Tena, Seelye's Cough and La Grippe Remedy and Seelye's Fluorilla Compound (A. B. Seelye Medical Company) were misbranded because the therapeutic claims were unwarranted. Aspirin Tablets (Verandah Chemical Company) were misbranded because they contained no acetylsalicylic acid (aspirin). Dr. Grove's Anodyne for Infants (Smith, Klein & French Company) was misbranded because the therapeutic claims were unwarranted and because the carton failed to contain a statement of the quantity and proportion of morphin and alcohol contained therein. Cacapon Healing Water (Capon Springs Company) was adulterated in that it consisted in part of a filthy, decomposed and putrid animal and vegetable substance and misbranded because the curative claims were unwarranted. Seawright Water (Seawright Magnesian Lithia Spring Company) was adulterated in that it consisted in part of a filthy and decomposed vegetable substance (*Jour. A. M. A.*, July 24, 1920, p. 261).

**BENZYL BENZOATE.**—The chemical properties of benzyl benzoate have been known for years. Its therapeutic properties as an antispasmodic have been known only a short time. Before this new addition to our materia medica can be given thorough clinical trial, it is necessary that the products be of a quality sufficiently pure for medicinal use. For the physician's protection, as well as for an aid to the manufacturer, the A. M. A. Chemical Laboratory, at the request of the Council on Pharmacy and Chemistry, has elaborated purity standards. It has also examined the market supply and found that, on the whole, the non-proprietary medicinal brands are of a satisfactory grade for clinical use (*Jour. A. M. A.*, July 31, 1920, p. 335).

**A SHOTGUN MIXTURE.**—It is stated that the following prescription is used with success in "intestinal cases of a medical type": zinc sulphocarbonate, 0.5; bismuth subnitrate, 15.0; bismuth betanaphtholate, 8.0; camphorated tincture of opium, 15.0; syrup of acacia, 30.0; elixir lactopeptine, to make 130.0. In this the chief active ingredients are bismuth subnitrate and camphorated tincture of opium. The zinc sulphocarbonate is superfluous. The action of the bismuth betanaphtholate probably does not differ from that of bismuth subnitrate, and cinnamon water or simple elixir might as well be substituted for elixir lactopeptine. (*Jour. A. M. A.*, July 31, 1920, p. 335).



# THE JOURNAL

OF THE

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NUMBER 10

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3529 Pine St., St. Louis, Mo.

PUBLICATION COMMITTEE (W. H. BREUER, M.D., Chairman  
S. P. CHILD, M.D.  
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### ORIGINAL ARTICLES

#### TREATMENT OF ADVANCED CARCINOMATA OF THE MOUTH\*

VILRAY PAPIN BLAIR, M.D.  
ST. LOUIS

The direct causes of the poor end-results in cancer of the mouth are late or insufficient operation; in but few cases is the inherent virulence of the disease the dominant factor. If my premise is true, and I believe it is, then considering the facts that the presence of a lesion in the mouth is easily recognized by the patient from its first appearance in almost every instance, that clinical characteristics of early cancer of the mouth have been repeatedly described, and that if proper operative procedures were instituted in the initial stage of the disease the operative risk should be almost nil, the postoperative disability about that of a hemorrhoidectomy, and the resulting cures close to 100 per cent., it would seem reasonable to hope that at some future date operations of the type here depicted will cease to be a necessity. But as long as the majority of these cases come to the surgeon in a very advanced stage, or frankly inoperable, extreme measures will have to be adopted.

Two factors are chiefly responsible for the present status of the cases that come to operation and the death rate. The first is the interpretation of negative microscopic findings as positive assurance of the absence of cancer; and the other is the lack of appreciation on the part of the patient or the doctor of the importance of early exact diagnosis in apparently insignificant mouth lesions.

With few exceptions, cancers arising in or about the mouth are of the squamous cell variety, and it is my firm conviction that removal or gross destruction of the invaded tissue is still the safest method of treatment. But both radium and roentgen ray are very helpful adjuvants and I now use them as routine in

connection with both excision and cautery destruction.

For advanced cancer of the body of the tongue involving the floor of the mouth or the mandible, or for cancer of the base of the tongue, the operation shown in Figs. 9, 10, 11 and 12 not only greatly increases the range of operability but the postoperative functional results as regards speech are remarkably good and do not interfere materially with subsequent practice of profession or business.<sup>1</sup>

Prolonged cooking of the tissues after the plan of Percy's operation for cancer of the uterus is applicable to growths that encroach on the bone, but in the soft tissues a more accurate and therefore a more extensive removal can be made with a knife or a hot cutting cautery.

Gilmer of Chicago first pointed out the great advantage of not destroying a section of the full thickness of the body of the mandible and greatly influenced the destructive surgery of the lower jaw. As far as I know, Ochsner first treated cancer of the upper jaw by prolonged cooking with the soldering iron and Coughlin of St. Louis first proposed burning off a carcinoma of the lower jaw instead of removing the full thickness of the bone, but the latter procedure was at the time so radically new that one of our leading medical journals refused to publish it.

In order to cure advanced cancer one must boldly remove all invaded tissue and, when on the face, the willingness of the patient to submit to this and the inclination of the surgeon to remove enough tissue will be influenced by his ability to repair the resulting defects.

It is probable that in only 1 per cent. of fatal cancers of the mouth does infection extend below the clavicle. This fact with the extreme gruesomeness of the later stages of the disease should lend us confidence in attacking it surgically.

In all cases the related lymphatics of the neck should be removed.

Metropolitan Building.

\* Read at the Sixty-Third Annual Meeting of the Missouri State Medical Association, Jefferson City, April 6-8, 1920.

1. This operation is described in detail in Surg., Gynec. & Obst. (Feb.) 1920.

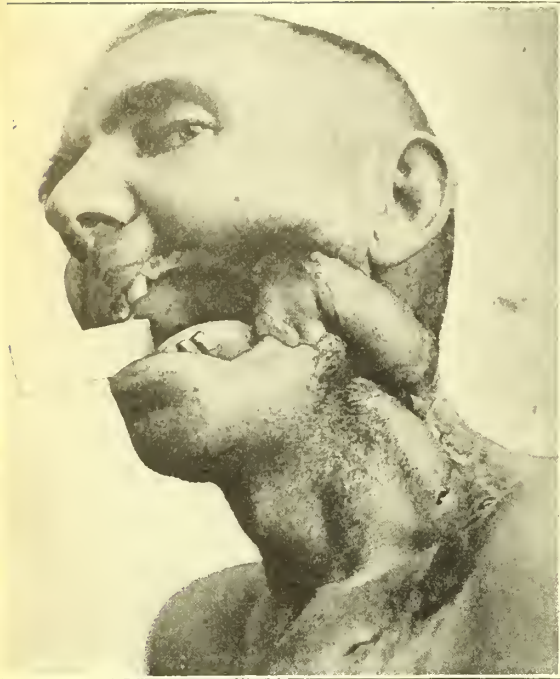


Fig. 1.—Lining of cheek, part of the upper lip, part of the soft palate, pillars of the fauces, part of the pharynx destroyed with the cautery to remove carcinoma. At a later period a flap of skin and subcutaneous tissue was taken from the neck and chest, with its base near the mastoid and the end sutured into the faucal-pharyngeal defect, after removing the scar.

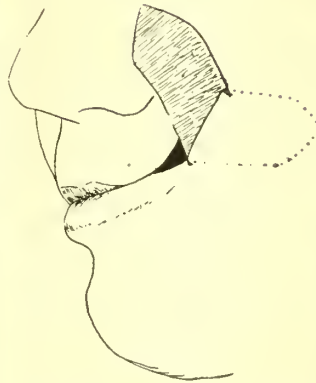


Fig. 3.—Illustrates how a flap with its base posterior and below was raised from beside the nose and turned in to line the cheek after removing the scar. Shaded area shows where flap was taken from and the dotted line shows its position within the cheek.



Fig. 4

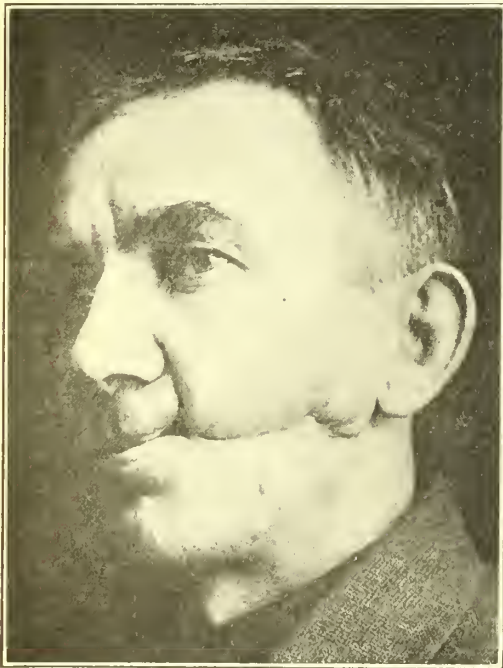


Fig. 2.—At a later period after the flap had obtained a new blood supply from within the pharynx, the pedicle was cut at its base, the scar removed from the pedicle. The scar that bound the skin to the jaw bone was removed from above and below, creating sulci. The unfolded pedicle of the flap was turned in to line the cheek, skin side toward mouth, and the cheek flaps sutured together. This still left a defect in the upper lip and the anterior part of the cheek, and the subsequent scar prevented him from opening his mouth.

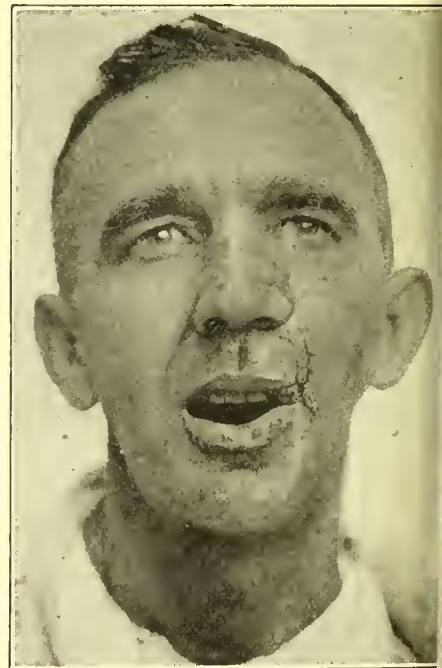


Fig. 5

Figs. 4 and 5.—Show repair of a lip that was made later operation by incising the base of the flap shown in Figure 3 and using part of this flap to line the lip and the vermilion border. In these two illustrations the scar line has been emphasized with a pencil to show the repair of the vermilion border made from the cheek flap.





Fig. 6.—Shows a recurrent carcinoma that has ulcerated through the cheek and submaxillary region after the original growth on the gum had been supposedly destroyed by the cautery.



Fig. 7.—Shows the excision which included the full thickness of the cheek, submaxillary region, half of the mandible and half of the tongue. The feeding tube is shown in place in the nose.



Fig. 8.—Shows the repair that was made by a flap taken from the neck, including skin and platysma, with its base near the mastoid.

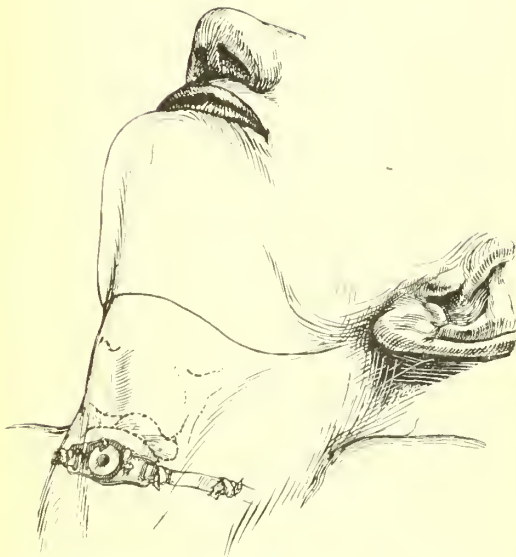


Fig. 9.—(This case had previously been deemed inoperable, had been given a series of roentgen-ray treatments, and the roentgenologist had concluded that the growth could not be controlled by this treatment.) Line of incision from behind the angle of the jaw on one side to a corresponding point on the other, crossing the midline at the lower border of the body of the hyoid bone. (Surg., Gynec. & Obst.)

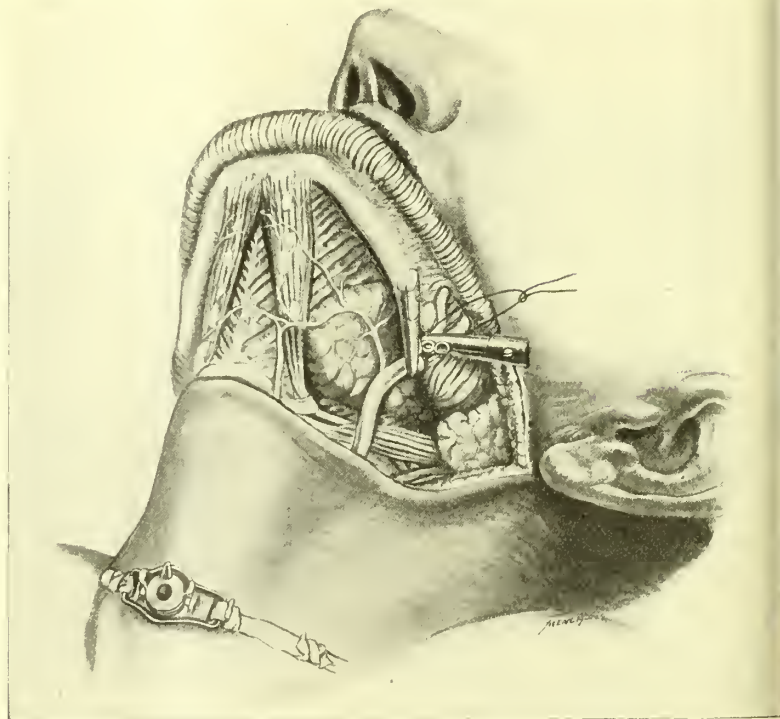


Fig. 10.—Shows the skin-platysma flap retracted upward and the facial artery and vein doubly caught and cut as they cross the lower jaw and ready to tie. In this figure and also in Figure 11, in order to identify them more easily, the muscles are shown stripped of their deep cervical fascia, but at operation they would be very much hidden by this fascia and usually by a deposit of fat. (Surg., Gynec. & Obst.)



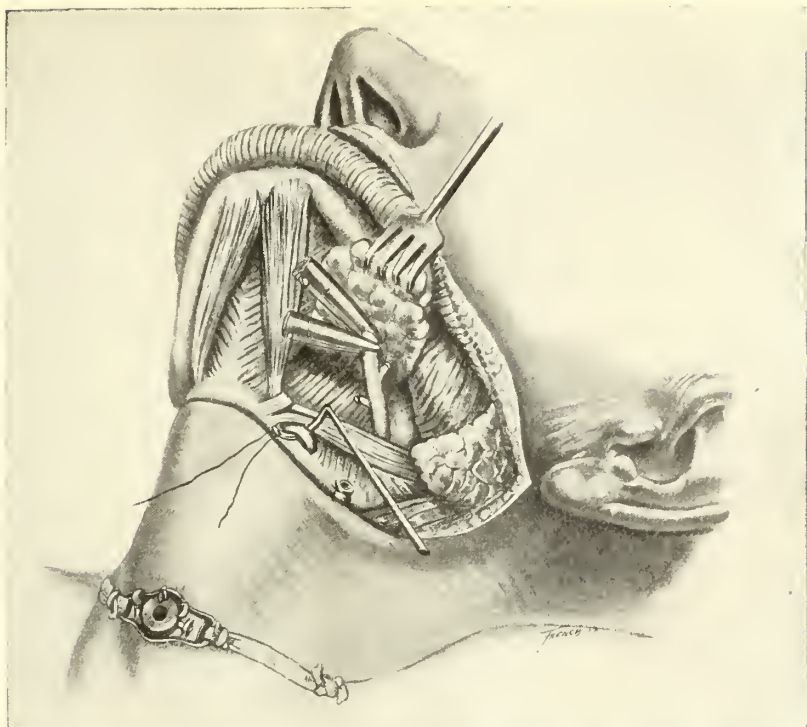


Fig. 11.—Shows the submaxillary gland of the left side drawn forcefully upward and the facial artery caught and ready to be cut and ligated as it enters the gland. The lingual artery is shown drawn out through a separation between the fibers of the hyoglossus muscle ready for ligation. (Surg., Gynec. & Obst.)



Fig. 12.—Shows the completed excision and the wound ready to close. Note that in this case the posterior pillars of the pharynx are left intact while the anterior pillars and the tonsils have been removed, leaving the lower part of the internal pterygoid muscles exposed. The illustration also shows the lower part of the parotid gland removed, the facial artery standing up free in the pharynx and the posterior belly of the digastric muscle sutured to the sternomastoid to wall off the carotid triangle from the pharynx. If, before suturing these two muscles, the space between them has any depth, it should be drained through a separate stab wound in the skin. (Surg., Gynec. & Obst.)

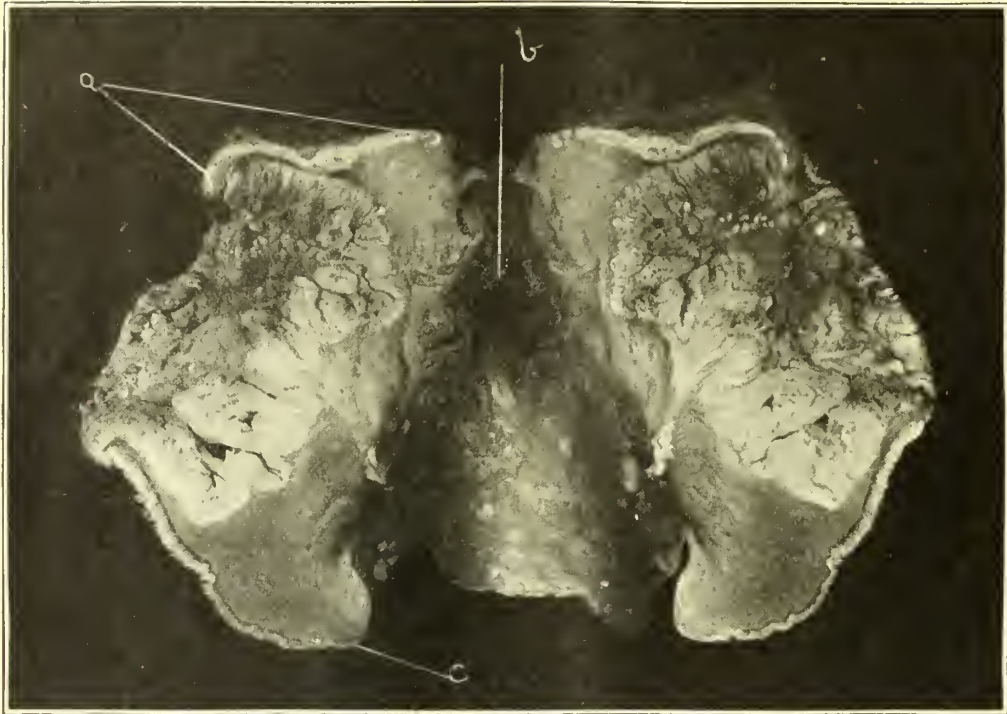


Fig. 13.—A tongue with an infiltrating carcinoma of the base shown split longitudinally in the midline. In this case the tongue, floor of the mouth, the submaxillary and submental glands, the hyoid bone and the epiglottis were removed in one piece. (a) Epiglottis; (b) cut end of hyoid bone; (c) tip of tongue.



Fig. 14.—Shows a defect in the floor of the mouth in a case in which the wound had to be opened for secondary hemorrhage following the operation illustrated in Figures 9, 10, 11, 12. The suture line across the neck shows a flap that has been raised with its base at the defect and sutured back in place to secure its blood supply. In this case the feeding tube is shown protruding from the mouth.



Fig. 15.—Shows the repair that was made by raising the neck flap so that its skin surface formed the floor of the mouth and infolding the submaxillary flaps so that they were applied to the raw surface of this neck flap. This neck flap had previously been depilated by roentgen ray.





Fig. 16.—Shows the method of applying roentgen-ray treatment after dissection of the neck before suturing the flaps.



Fig. 18.—Is a roentgenogram of a jaw bone in which, after biting away most of the thickness for an infiltrating growth, the cautery was used. The thin dark line at the lower border of the mandible shows new bone formation. The broader dark line above this is dead bone that subsequently exfoliated. A silver splint, is shown which was attached to the teeth to keep the jaw from fracturing.

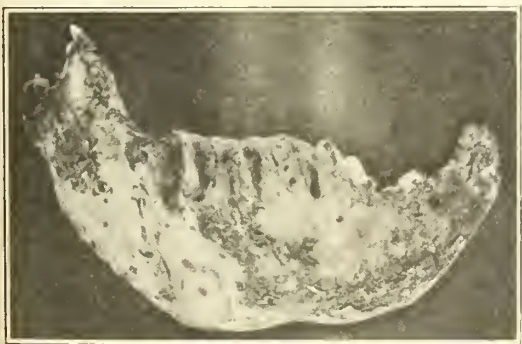


Fig. 17.—A large piece of exfoliated bone that came away from one of these cases after excessive use of the cautery when the carcinoma was attached to the jaw.

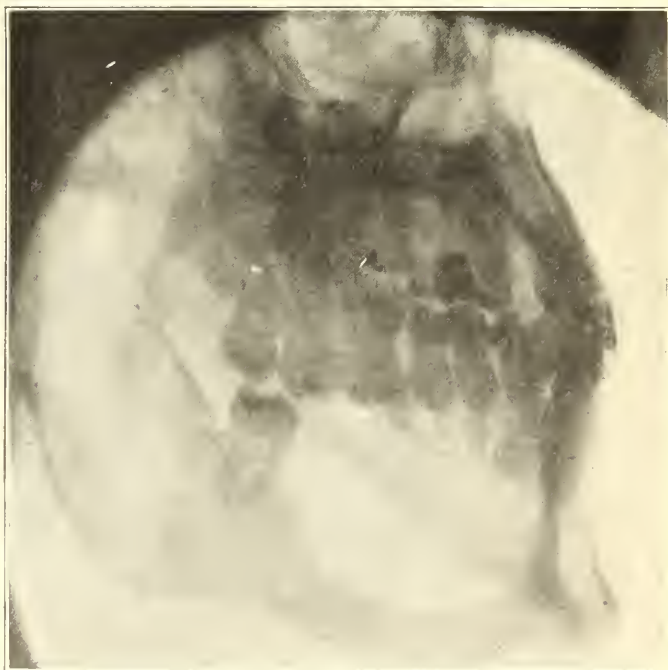


Fig. 19.—Shows regeneration of bone that occurred in seven months.



Fig. 20.—Shows lines of incision for neck dissection and for approaching a carcinoma on the anterior faucal pillar and encroaching between the jaws. A 1-inch section of the mandible is removed at the same time, which not only gives direct approach to the growth, but which forms a subsequent false joint, allowing movement of the lower jaw. This otherwise could not occur on account of scar binding the two jaws together.



Fig. 21

Fig. 22

Fig. 21.—A defect in the cheek after removing a carcinoma with the cautery. This was repaired by removing the scar and liberating the skin edges from the jaw bones, then turning a flap from the forehead with its base at the temple, skin surface toward the mouth. To the raw surface of this flap were applied the skin of the cheeks and the remaining raw surface on the flap as well as on the forehead skin flap.

Fig. 22.—At a subsequent operation the pedicle of this flap was cut and returned to the temporal region.

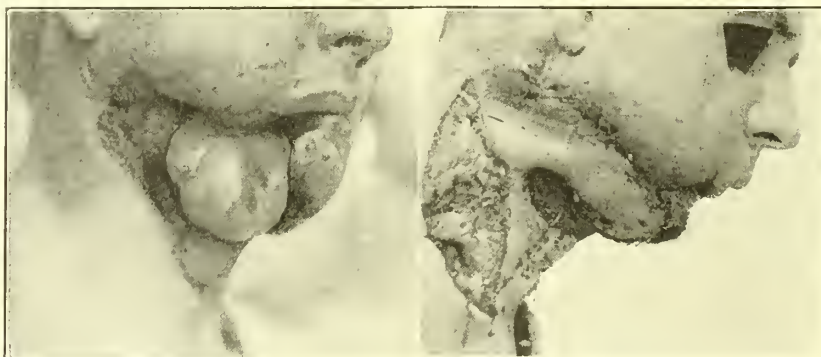


Fig. 23

Fig. 24

Fig. 23.—Showing the defect after removal of the jaw bone, cheek and submaxillary tissues for a recurrent carcinoma. The enlarged edematous tongue is seen protruding through the defect. (From Blair's "Surgery and Disease of Mouth and Jaws.")

Fig. 24.—Shows the repair after it was recently made by a flap taken from the neck. The deep cervical dissection was made at the same time and the deep structures covered by the sternomastoid muscle. The skin defect was allowed to close by granulation. (From Blair's "Surgery and Disease of Mouth and Jaws.")



## THE DIAGNOSIS OF CHRONIC MYOCARDITIS\*

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Most clinicians consider the diagnosis of chronic myocarditis difficult. Whether it is so or not is largely a question of definition, of what we mean by chronic myocarditis. The pathologist uses this term to indicate that the heart muscle shows on macroscopic, or at least on microscopic, examination recognizable degenerative changes, such as fatty degeneration or necrosis; or to indicate that there is a fibrosis of the myocardium, diffuse or focal. If clinicians use the term myocarditis in this sense, then its diagnosis is indeed difficult. Cabot, in a paper correlating clinical and pathologic diagnoses, said that in 52 per cent. of the cases diagnosed chronic myocarditis during life no such lesion was found at necropsy, and in only 22 per cent. of the cases did the clinical and pathologic diagnosis agree.

The difficulty is that we have few if any direct signs of this condition. In the case of valvular lesions the relationship between the disturbances of valvular function, the murmurs, etc., that we observe, and the pathologic lesions which produce them is so close and direct that we look on the terms valvular insufficiency and stenosis as anatomic rather than functional diagnoses; which, of course, they really are. In the case of myocarditis, however, there may be little relationship between the clinical signs which indicate disturbances of the function of the heart muscle and the lesions of the myocardium found at necropsy. To avoid this difficulty many clinicians abandon the term myocarditis and make only a functional diagnosis, such as myocardial insufficiency, that the pathologist can not find fault with. The trouble with this term is that it is apt to be applied only when there is evidence of advanced heart failure—venous congestion and edema; and cases of nonvalvular heart disease with only slight or moderately damaged function go without an adequate cardiac diagnosis.

When I speak of chronic myocarditis this evening I wish to indicate only that there is something wrong with the myocardium, something which has already interfered, or will probably in future interfere, with its function. This something may be fibrosis, or degenerative changes, or it may be something that the pathologist can not recognize by the present methods of necropsy examination. Myocarditis in this sense may be correctly diagnosed in the great majority of cases although the method of diagnosis may be a somewhat indirect one.

If the term is used in this sense, most patients, nearly all patients, with aortic insuffi-

ciency or stenosis, with mitral stenosis, or with aortic aneurysm, have chronic myocarditis. The etiologic agent, whether it be rheumatic fever, chorea, syphilis, or some other infection, does not usually attack the valves or the aorta alone but also the heart muscle. It is the ultimate failure of this damaged muscle, hastened it is true by the increased work thrown on the heart and the circulatory changes mechanically produced by the imperfect action of damaged valves, that makes valvular disease serious. Occasionally, of course, valvular lesions, especially stenoses, of such severe grade occur that they of themselves seriously embarrass the circulatory system; but in most cases the heart muscle if normal could maintain a fairly adequate blood flow in spite of the valve defect. This is shown by the differences between experimental valve lesions produced in animals by aseptic methods and the valve lesions with which we are so familiar in man. I do not mean that we should diagnose every case of organic valvular disease chronic myocarditis; that is unnecessary so long as we recognize that we are not usually dealing in such cases with a normal heart muscle.

When the heart is enlarged there is obviously something wrong with the myocardium; the muscle fibers are hypertrophied or they are overstretched by cardiac dilatation. Enlargement of the heart is therefore one of the most reliable signs of myocarditis. One frequently gets the idea from textbooks that cardiac enlargement is a compensatory phenomenon. The natural conclusion is that heart disease is less serious when enlargement is present than when it is absent. Clinical experience does not confirm this view; cardiac enlargement is of ill omen and the greater it is the more serious it is. Recent work indicates that increased demands on the myocardium due to valve lesions, to high blood pressure, or to adherent pericardium are not the sole, perhaps not even the most important, cause of cardiac hypertrophy. Many patients with great cardiac hypertrophy show no lesions and give no history to indicate that the work of the heart has been excessive. But whether we look on mechanical factors as the main cause of cardiac hypertrophy or whether we attribute it in part to other less well understood factors, the degree of cardiac enlargement is a reliable index of the severity of the underlying process. As pointed out by Krehl and others, enlarged hearts are prone to show degenerative changes and fibrosis, but even if they do not, the fact that they rarely long maintain a normal circulation, even when no valve lesions are present and when the demands made on the heart are not excessive, indicates that the myocardium is damaged. In dealing with soldiers with valve lesions at the British Heart Hospital during the war, it was found that the great majority of these patients showed no signs of circulatory embarrassment; many of them had

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gone through two or three years of life in the trenches without difficulty and had been sent to hospital only because the valve lesion was discovered during some acute illness or because of noncardiac symptoms. On examination, however, these men rarely showed more than slight enlargement of the heart. Those with big hearts usually had circulatory symptoms. Every patient with great cardiac enlargement may, therefore, be diagnosed myocarditis, if by myocarditis we mean a damaged heart muscle. The most frequent causes of myocardial damage after middle age are arteriosclerosis and hypertension. When patients with a high grade of arteriosclerosis or a persistent blood pressure of more than 180 mm. Hg. show cardiac enlargement or have symptoms of beginning heart failure, myocarditis is present. The practice of diagnosing such cases mitral insufficiency because they have a systolic murmur at the apex is a pernicious one. It draws the attention of the student or the inexperienced away from the essential feature of the case. It is true that such patients often do have relative mitral insufficiency but the relative insufficiency is the result and not the cause of the cardiac disturbance. It results from the cardiac dilatation that comes with myocardial weakness. When the heart fails in such cases it is the damaged heart muscle and not the slightly widened valve orifice that is at fault.

To discuss at length the relationship of the cardiac irregularities to myocardial damage would take more time than is available. I can only mention the more common ones.

Sinus arrhythmia, the waxing and waning of the heart rate, quickening with inspiration, slowing with expiration, that is so common in the youthful, is due to variations in the vagus control of the pacemaker of the heart, the sino-auricular node where the heart beat is initiated. This irregularity can be recognized by its relationship to the phases of respiration; a relationship that is sometimes absent during quiet but rarely during deep breathing. The irregularity is rarely present when the heart rate is above 100 per minute and when present at a lower rate disappears when the rate is accelerated. It never indicates cardiac disease and should be disregarded. It is mentioned here only because it must be differentiated from irregularities of other types.

Extrasystoles are beats which arise outside the sino-auricular node in the auricular or ventricular muscle. They occur as occasional or frequent interruptions of an otherwise regular rhythm. It is the presence of this dominant regular rhythm, interrupted at regular or irregular intervals by beats which come too soon and which are followed by unusually long pauses, that distinguishes extrasystoles from other disturbances of the cardiac mechanism. In rare instances extrasystoles are so frequent as to pro-

duce an irregularity which it is difficult to analyze except by graphic methods, but as a rule they can be easily recognized by auscultation of the heart and palpation of the pulse. They are rarely present when the heart rate is more than 120 per minute and they tend to disappear as the heart rate rises. Experience has shown that extrasystoles are of little prognostic significance; they are more frequent in patients who have organic heart disease than in those who have not, but they are rarely numerous enough to interfere with the circulation, and they frequently occur in people who are otherwise well and who remain so. They are of no help in the diagnosis of myocarditis.

Paroxysmal tachycardia, auricular flutter, and heart block are important disturbances of the cardiac mechanism; but they are relatively uncommon and lack of time prevents me from discussing them here.

There is one type of cardiac irregularity, however, which is so frequent and which is so closely associated with myocarditis that it requires more detailed attention; I refer to auricular fibrillation. In this condition the auricles have ceased to contract coordinately and are motionless from a mechanical standpoint; but each separate fibril of the auricular muscle is quivering and sending impulses down the His bundle to the ventricles. As a result the ventricles are usually driven at a very rapid rate and their rhythm becomes totally irregular. The irregularity and tachycardia so greatly increase the work of the heart and so greatly decrease the effectiveness with which this work is performed that the onset of auricular fibrillation is often closely followed by cardiac decompensation.

Auricular fibrillation is a very common condition; Levine states that during thirty months 128 cases of auricular fibrillation were admitted to the wards of the Peter Bent Brigham Hospital. During the same period 140 cases of pneumonia were treated. In compiling these figures readmissions were not counted and patients with auricular fibrillation, unlike patients with pneumonia, return to hospital many times. It will be seen, therefore, that auricular fibrillation makes up one of the largest groups with which our hospitals have to deal. In the young, auricular fibrillation is usually the result of rheumatic fever and is most commonly associated with mitral stenosis; a few cases result from exophthalmic goiter. In patients past middle age, auricular fibrillation is most often associated with nonvalvular heart disease occurring with or without hypertension or arteriosclerosis.

Every patient with auricular fibrillation has myocarditis, and every patient with persistent auricular fibrillation has chronic myocarditis, for it is a disturbance of the heart muscle that gives rise to this condition; most cases that come



to necropsy show demonstrable myocardial lesions, if the heart is carefully examined. The importance of recognizing auricular fibrillation is not due to its relationship to myocarditis alone; it is especially amenable to treatment. It is the only disturbance of the heart's function in which the physician can confidently predict that digitalis will produce strikingly beneficial results. In such cases we know what digitalis will do before we give it. It is no doubt true that digitalis benefits many patients with other types of heart disease; it does not benefit all and to separate those which it will benefit from those which it will not is, in the present state of our knowledge, impossible. Except in auricular fibrillation, we give it with hope rather than with confidence that it will produce results. The effect of digitalis in auricular fibrillation is to depress the conductivity of the His bundle and thus to reduce the ventricular rate; it should be given until the rate has decreased to within normal limits.

The importance of auricular fibrillation urges me to say something about its recognition. You all know that it may be diagnosed by the use of graphic methods; by the use of the electrocardiograph or the polygraph; but these instruments are not always at hand and you must be able to recognize this condition without their aid. This is possible in the majority of instances.

Untreated cases of auricular fibrillation usually show a rapid irregular heart rate; and when I say heart rate I mean the heart rate as determined by stethoscope or palpation of the apex beat, not by palpation of the radial pulse. When the heart is beating irregularly the pulse rate may be a very imperfect index of the heart rate, for many of the weak beats fail to reach the wrist. An irregular rhythm with a heart rate of more than 120 is usually, and an irregular rhythm with a heart rate of more than 140 is almost always, due to auricular fibrillation. All the other irregularities are rare at these rates. Furthermore, if the rhythm is irregular and the heart rate is below 120, such measures as the administration of atropin, or amyl nitrite, or, best of all, exercise when this is possible, which increase the heart rate above this figure, will usually abolish such irregularities as sinus arrhythmia, extrasystoles, and partial heart-block; but will make the irregularity of auricular fibrillation more conspicuous.

The second point in the diagnosis of auricular fibrillation is its tendency to persist; in the majority of cases it is permanent. Other irregularities are for the most part transient—present today, gone tomorrow; but auricular fibrillation once established usually persists for the remainder of life.

Thirdly, the character of the irregularity is distinctive. No dominant rhythm is present, no variations in rate occur with the phases of respi-

ration; but the intervals separating successive heart beats and the size of the pulse waves at the wrist vary without rule or regularity. When the heart rate is fast a perfect delirium of sounds is heard over the precordium.

Fourthly, auricular fibrillation is the most common irregularity seen in patients with cardiac decompensation and when the heart is beating irregularly in such cases it should be considered first.

Pulsus alternans in which every second pulse beat is smaller than its predecessor although the intervals separating the pulse beats are all of equal length, is a reliable sign of myocarditis. It indicates a fast failing myocardium and is of the greatest value in diagnosis as well as in prognosis. It may be recognized by palpation of the pulse when of severe grade but the less marked forms are not as a rule apparent unless looked for either in polygrams or during blood pressure examinations. In taking the blood pressure it is noted that the stronger beats come through at a higher level of pressure than the weak ones.

Modifications of the heart sounds have a reputation in the diagnosis of myocarditis which they do not deserve. So-called distant sounds or sounds of poor quality are as often due to low blood pressure, to a thick chest wall, or to emphysema, as to heart disease. Even when these factors are taken into consideration the evaluation of modifications of the heart sounds is a difficult matter. I do not mean that we should not try to evaluate them but we should remember the difficulties and if we find abnormal sounds, seek repeatedly for other and more certain signs.

Gallop rhythm is frequently heard in cases of myocarditis as well as in mitral stenosis. It is of two types which are not always distinguishable. Presystolic gallop rhythm is sometimes due to a separation of the auricular element of the first sound from the other elements. That the auricles produce a sound is shown by cases of complete heart block in which auricular systole can often be heard. When the auricles are hypertrophied or when auricular systole is separated from ventricular systole by an abnormally great interval, as in the early stages of heart block, the sound of auricular systole may be heard just preceding the first sound. Protodiastolic gallop rhythm, in which the extra sound is heard in early diastole, is less well understood; it is sometimes due to an accentuation of the normal third heart sound and may be heard occasionally in normal people. In mitral stenosis, gallop rhythm of this type is sometimes due to an abortive mid-diastolic murmur. Gallop rhythm is of value in the diagnosis of myocarditis but as a rule more constant and more reliable signs are present.

Every patient with cardiac decompensation who has neither aortic insufficiency nor stenosis

nor mitral stenosis may be looked on as a case of chronic myocarditis: it is the failure of the heart muscle to do its work that gives rise to this condition. Less marked symptoms of cardiac insufficiency, such as increasing shortness of breath or anginal attacks, are to be looked on as myocardial in origin when they occur in patients past middle age, providing no noncardiac cause for them can be found. The diagnosis of chronic myocarditis in the young on symptoms alone is not justifiable.

A few words may be said here about the electrocardiographic diagnosis of myocardial damage. Electrocardiograms are of great value but they can not take the place of clinical observation. The electrocardiogram gives no evidence of the force with which the heart contracts as is shown by the fact that electrocardiograms may be recorded after clinical death—after the heart has stopped beating. Electrocardiograms have their chief value in recognizing lesions of the special conducting tissues of the heart; of the His bundle and its branches which line the endocardial surface of the ventricles. When lesions occur in the larger branches of this system they may be recognized and such lesions indicate widespread myocardial injury; but lesions in the ordinary ventricular muscle seem to lie, so far as the electrocardiogram is concerned, in silent regions.

Suppose now, that we make a diagnosis of chronic myocarditis, in the sense in which I have used this term, and the patient dies and at necropsy no myocardial lesions are found; and, as is so often the case, no other cause is found to account for death. Are we to consider our diagnosis wrong? I do not think so. Myocardial failure may cause death, and if the pathologist can find no lesions in such cases the fault is with the methods of pathology and not with those of clinical medicine. Or rather, if there is a fault, it lies with the idea that disturbances of function must rest on morphologic lesions; to be more exact, on those morphologic lesions with which we are familiar.

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### THROMBOSIS OF THE CORONARY ARTERIES WITH TACHYCARDIA\*

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#### PART I

The classical picture of coronary thrombosis, that of very sudden death, allows no time for clinical examination and study and consequently no electrocardiographic observations have been made in such cases. This usual course of

events is illustrated by the following account of a typical example:

CASE 1.—Sudden death due to thrombosis of both coronaries which occurred during convalescence from a spinal cord tumor operation.

The patient, a man of 57 years, had a history of syphilitic infection with a secondary eruption at 21, followed by two years of mixed treatment. His marital history was suggestively positive, but the Wassermann reaction was negative. A diagnosis of spinal cord tumor was made on the basis of characteristic neurologic findings. A fibroma of the dorsal meninges was successfully removed at operation. Convalescence was uneventful. After sitting up in a chair for the first time, for half an hour, he was returned to bed in good condition, and was noted to be in as good condition as usual at 9:05 p. m. At 9:06 p. m. he suddenly started up in bed, cried out and fell back on his pillow, cyanotic, gasping, twitching his body, struggling and throwing his arms about for a few seconds. He was pulseless and no heart sounds could be heard. The pupils were dilated. Respiratory efforts ceased after a few minutes. No rise in pulse rate was noted. No electrocardiograms were taken. Necropsy showed almost complete occlusion of both the left and the right coronary arteries for a distance of 4.5 to 5.0 cm. from their origins. The myocardium showed slight hyaline scarring, especially about the arteries.

Another type of case, in which the electrocardiograms give some suggestive evidence, though not absolutely characteristic findings of coronary thrombosis, is illustrated by our second case history.

This case resembles Case 4 of Dock's<sup>1</sup> series and Case 2 of Herrick's<sup>2</sup> series, but the lesion was more extensive in that there was ventricular rupture in the infarcted necrotic area. The electrocardiograms were not unlike those of Herrick's Case 3, where the infarcted ventricular wall had become fibrotic. The strikingly minute complexes were suggestive of some grave and extensive myocardial lesion.

CASE 2.—Thrombosis of the descending branch of the left coronary artery with rupture of the ventricular wall in the infarcted area. Terminal tachycardia on the tenth day. Abnormal electrocardiograms.

A married man, aged 61, was brought into the hospital in extremis; the past history was negative except that his associates had noticed signs of serious circulatory trouble, for which he had been taking potassium iodid, for about ten years.

Twelve days previously, while walking up a hill, he became very breathless and "could not move." After this he had dyspnea on the slightest exertion. Six hours before admission while sitting quietly he was seized with a sudden attack of dyspnea with severe pain in the arm and precordium. He had persistent aching pain from his left shoulder to the first phalanges.

On admission there was extreme orthopnea and expiratory dyspnea. The face was ashy; the skin cool and moist. The pulse rate was 120 and the pulse felt hard and regular. The heart was moderately enlarged. The heart sounds were moderately loud and aortic second sound was accentuated. The rhythm was regular. Auscultation was made difficult by the

\* Read at the Cardiac Symposium, St. Louis Medical Society, April 13, 1920.

\* From the Medical Clinic of Washington University Medical School.

1. Dock, George: Notes on the Coronary Arteries, Independent Publication, 1896.

2. Herrick, James B.: Clinical Features of Sudden Obstruction of the Coronary Arteries, J. A. M. A. 59: 1909; J. A. M. A. 72: 1919.



noisy respiration. The roentgen ray showed a dilated aortic arch. The lungs were overdistended and wheezing prolonged expiration, with few crackling râles, were heard over the entire chest. The abdomen was distended and liver dullness was small. The blood pressure was systolic, 180; diastolic, 110. The laboratory findings were those of chronic nephritis with moderately reduced kidney function. Ophthalmoscopic examination showed extreme tortuosity of the retinal vessels and a hemorrhage into the left fundus. The Wassermann was repeatedly positive, to all antigens.

A pericardial friction rub developed the third day in the hospital. The temperature rose to 102°. There was a moderate leukocytosis. The blood pressure ranged from 200 to 245 systolic. The diastolic was 110.

Hydrothorax developed and 1,450 c.c. of fluid were removed on the sixth day. On the tenth day the patient had his most severe attack of dyspnea. He became irrational. Respiration was Cheyne-Stokes in type. He tried to get out of bed; only moderate restraint was used. He died thirty minutes later. The terminal pulse rate was 155.

Necropsy showed hemopericardium with a ragged, linear 6.0 cm. tear through left ventricular wall. The infarcted area was of grayish opaque color and there was bulging of lower ventricular wall. Coronary artery branches going to the left apex were filled with organized red and white thrombi.

#### PART II

That occlusion of smaller branches of the coronary arteries does not necessarily cause immediate death was pointed out by Dock<sup>1</sup> and has been more recently emphasized by Herrick.<sup>2</sup> Days, even months, may elapse between the time of the obstruction and death. It is in these cases that electrocardiograms may give valuable confirmatory diagnostic and prognostic evidence.

Lewis<sup>3</sup> found that ligation of the coronary arteries in dogs frequently produced a definite progression of electrocardiographic changes. Single ventricular extrasystoles first appeared about one and one-half hours after the ligation. The extrasystoles became more frequent, then appeared in groups; the groups became gradually longer, forming paroxysms of ventricular tachycardia. Normal rhythm was usually re-established or, more rarely, the tachycardia passed imperceptibly into ventricular fibrillation which practically always proved fatal.

Smith<sup>4</sup> made similar observations on dogs in which the ligation of the coronaries was carried out under surgical asepsis and many of the dogs were allowed to live as long as ninety days. He also added the observation that a progression of changes in the T-wave was significant in coronary occlusion. Herrick's Case 3 and our Case 3 seem to corroborate this observation clinically.

In some experimental work in our laboratory<sup>5</sup> we have clamped the anterior descending branch of the left coronary artery and have

recorded ectopic ventricular contractions; at first single, then in groups, then in paroxysms of ventricular tachycardia ending in ventricular fibrillation. During the tachycardia there was alternation.

Experimental work indicates, therefore, that interference with the coronary circulation produces paroxysmal ventricular tachycardia. That this is also the case in man seems probable from a study of clinical and necropsy observation.

A study of literature on paroxysmal tachycardia of ventricular origin showed six undoubted and six probable cases and a questionable one. Most of these are in middle aged men in whom there are evidences of coronary artery disease or in whom pathology in the coronary arteries might well be expected. One at necropsy showed a probable syphilitic lesion in the distribution of the descending branch of the left coronary. Another at necropsy showed atheromata of the left coronary and of the aortic valve and fibrotic areas in the myocardium which, according to Warthin,<sup>6</sup> are syphilitic. The prognosis, especially in the undoubted cases, is grave.

We have had four cases of paroxysmal tachycardia of undoubtedly ventricular origin. In one instance, Case 4, who died twenty-six hours after the onset of the attack, the diagnosis on the clinical and electrocardiographic evidence was substantiated at necropsy by the demonstration of thrombosis of the anterior descending branch of the left coronary artery. This is the first clinical illustration in the literature of Lewis' experimental fact that coronary obstruction is associated with paroxysmal tachycardia of ventricular origin.

Of the other three cases of paroxysmal tachycardia of ventricular origin all gave histories of attacks which suggested coronary thrombosis. One died six weeks after the onset without ever recovering from the attack. Another died suddenly six months after recovery from the first observed attack of coronary thrombosis, while the other case recovered and is still living two years after the attack in which he was observed.

CASE 3.—Acute symptoms of coronary thrombosis, paroxysmal ventricular tachycardia, rate 240. Living two years after the attack.

A laborer of 48, gave a history of a sore on the penis at 17 with an indefinite history of secondary syphilitic lesions. He had been a moderate alcoholic. His marital history was suggestively positive. He had a past history of frequent typical attacks of acute rheumatic fever and many injuries. He had had one previous attack of palpitation. He was admitted to the hospital with the complaint of pain in the chest and heart, and palpitation.

His story was that six days previously, on reclining, he was taken suddenly with sharp pain in chest, a "thumping of the heart, and a choking sensation." He had nausea, retching and frequent vomiting. His heart quieted down two days after the onset and his

3. Lewis, Thomas: The Experimental Production of Paroxysmal Tachycardia and the Effects of Ligation of the Coronary Arteries, *Heart* 1: 43, 1909-1910.

4. Smith, Fred M.: The Ligation of Coronary Arteries with Electrocardiographic Study, *Arch. Int. Med.* 22: 8, 1908.

5. Wilson, Frank N.: Personal communication.

6. Warthin, Aldred S.: The New Pathology of Syphilis, Harvey Lecture, *Am. J. Syph.* 2: 425 (July) 1918.

symptoms disappeared. But the exertion of going back to work caused the symptoms to return. The tachycardia and palpitation persisted for five days in spite of vagus and ocular pressure and then stopped spontaneously.

The patient had a worried, anxious expression with slight cyanosis of the lips, ears and nail beds. The face had an ashy hue. There was slight engorgement of veins of the neck. He was moderately dyspneic, respiration was Cheyne-Stokes in type. Râles were heard in both bases posteriorly.

Heart: There was a fluttering pulsation in the region of the apex and in the epigastrium. The heart was moderately enlarged. The heart sounds were distinct, with tic tac rhythm. The pulmonary second sound was accentuated. Two sounds were heard at the base but only one at the apex; the heart rate was 230 to 240 per minute. At 7 feet the roentgen-ray plate showed an extreme degree of aortitis, more suggestive of an arteriosclerotic process than a syphilitic one. The blood pressure was 80 systolic and 68 diastolic.

The abdomen was distended and rigid. The edge of the liver was felt 7 cm. below the costal margin; the surface felt smooth and palpation in the region caused pain. The pupils were irregular and reacted sluggishly to light. The knee and Achilles reflexes were exaggerated. All laboratory findings were within normal limits. The blood Wassermann was negative to all antigens, as it had been on two other examinations. Occasionally it was ++ with the cholesterin antigen, more rarely with alcoholic or Noguchi antigens. On one occasion there was a +++ reaction with cholesterin antigen. The spinal fluid Wassermann was ++++ with cholesterin, ++ with alcoholic and Noguchi antigens.

Electrocardiograms showed paroxysmal ventricular tachycardia. Irregularities were noted on transition to normal rhythm on the second day in hospital. The electrocardiographic complexes after the paroxysm showed markedly inverted T-waves in all leads. T in Lead 3 was first to become positive again, six days later, and all T-waves (T1, T2 and T3) were positive twenty-six days later and have remained so. This progression of the T-wave agrees with the experimental findings of Smith,<sup>4</sup> thus giving evidence that the case was one of coronary occlusion.

After the return to the normal rhythm, aortic diastolic and systolic murmurs were heard. The blood pressure was 105 systolic and 60 diastolic. Right hydrothorax was drained once. Arsenic and mercury treatment have been carried out. The patient at present, two years after the attack that was considered coronary thrombosis, has no further cardiac signs and no return of symptoms. He has signs of syphilis of the nervous system with attacks of shooting pains that suggest tabetic crisis.

CASE 4.—Mild anginal attacks for three years. A severe prolonged attack with subsequent disablement for two and one-half months. Recurrence with severe palpitation. Paroxysmal ventricular tachycardia rate 180. Two attacks. Apparent recovery. Dropped dead about six months after these attacks.

The patient, a housewife, aged 53, related a past history that was not significant except that she had never been pregnant, the cause of sterility being unknown. She was admitted to the hospital for heart trouble, weakness and after breakfast attacks of an "all gone generally depressed feeling," and a sensation of heaviness and aching pain in the arms, especially the left, and difficulty in climbing stairs. The attacks and symptoms had become progressively worse and more frequent. She noted that any slight exertion or excitement brought on an attack. The attacks were relieved by rest and gaseous eructation. Six months before admission she suffered a severe attack which lasted about six hours, following which she was confined to her bed for two weeks. A second severe attack brought her to the hospital.

Physical examination showed a moderately obese woman with slight cyanosis of lips, mucous membranes and nail beds, and slight dyspnea. Heart: The apex was not seen or felt. There was slight cardiac enlargement on percussion. Fluoroscopy showed an "enlarged heart." The heart sounds were faint at the apex, almost inaudible at the base, and best heard in the third left intercostal space. The heart rate was rapid. No murmurs were heard. Single and multiple extrasystoles were noted. The abdomen was distended. The stomach was large, low and atonic. The blood pressure was 135 systolic and 90 diastolic, and remained so.

Examination of the blood showed a secondary anemia, which, however, improved under treatment. The urine, on admission, contained albumin and many hyaline and granular casts, probably due to passive congestion of the kidney. These abnormal findings disappeared during her stay in the hospital. The Wassermann was negative to all antigens.

During her stay in the hospital she had one mild attack of ventricular tachycardia brought on by exercise. A second severe attack came on spontaneously after breakfast one day and lasted for forty-five minutes. The heart rate during this attack was 170 per minute. The patient suddenly dropped dead six months later, while walking across a room in her home.

CASE 5.—Acute symptoms of coronary thrombosis. Paroxysmal ventricular tachycardia, rate 180 to 250. Status angiosus with frequently recurring periods of more intense anginal pains until his death six weeks after the onset of first attack.

A salesman, aged 58, was admitted to the hospital giving the history that his father had suddenly died at the age of 56 of a condition similar to his own. His past history was irrelevant except that he was found to have been suffering from chronic nephritis at 48. A low protein diet was prescribed and he was told to abstain from alcoholic beverages. He had been a moderately excessive alcoholic up to this time.

Two weeks previous to admission when returning home from a "movie" he was suddenly taken with a sharp precordial pain with radiation down the left arm, a sense of substernal constriction, and difficulty in breathing. He had "stumbled home alone." The pain was very severe all night, and was relieved only by morphia. The pain recurred and persisted. The breathing had been more or less labored and cyanosis had been present. In several attacks, the first on the fifth day of his illness, the symptoms were even more severe. He suffered excruciating pain with cold perspiration and a rapid, weak, thready pulse. The intermittent pain was so severe that the patient would "cry out." He was delirious at times. His condition had been diagnosed pneumonia on the grounds of "rusty, blood tinged sputum" and fever of 101.6 F. The collapse or decompensation had begun three days before admission. His nurse said that the rapid heart rate had begun on the fourth day of his illness. On physical examination patient was found to be stuporous and comatose, very cyanotic and dyspneic. Heart rate was 180 to 220 at the apex and regular. The first sound was louder than the other. The pulmonary second was weak. In the aortic area both sounds were weak and much alike. The heart was enlarged to percussion. The systolic blood pressure was 138 on admission; 102 in the first attack, 100 on the second day; 95 the second night. Lungs: Râles were present at the bases of the lungs posteriorly; the lungs otherwise were negative. The abdomen was slightly distended, the liver edge was 8 cm. below the costal margin. Course in hospital: The blood pressure on twenty-first day of his illness was systolic, 112; diastolic, 80; after that it was maintained at about 150 systolic and diastolic 90. Tachycardia ranging from 190 up to 248 per minute continued until twenty-fifth day, when pulse rate assumed a lower level, 150 to 180. Alternation was noted. The patient



became delirious and gradually lost ground. The heart rate was 200 during last few days. The blood pressure was unobtainable the last day, and the heart rate was recorded at 102 per half minute.

The laboratory findings were those of chronic nephritis with poor kidney function.

Electrocardiograms showed paroxysmal ventricular tachycardia and small broad ventricular complexes suggestive of myocarditis, when the normal rhythm was resumed.

CASE 6.—Acute symptoms of coronary thrombosis paroxysmal tachycardia of ventricular origin. Rate 190. Death twenty-six hours after onset of the attack. Diagnosis on clinical and electrocardiographic basis confirmed on necropsy.

The patient, a bachelor, aged 53, gave a history of "chancre" eight years previously, which was followed by three years of mercury treatment. The Wassermann was repeatedly negative. Two weeks before admission he visited the out-patient department giving a history of dyspnea on exertion for two years and substernal oppression for three or four months. His blood pressure was 165 systolic and 110 diastolic. Urine contained a trace of albumin and many fine and coarse granular casts. He was admitted to ward in extremis at 4 a. m. At about 2 a. m. severe pains in upper chest had awakened him from sleep. He also had a slight cough with expectoration of frothy, bloody mucus, and persistent precordial pain.

Physical examination showed severe prostration and orthopnea. The respirations were grunting groaning at a rate of 40 per minute. There was conspicuous cyanosis of the lips and hands, ashy pallor of face, and a clammy skin. The pulse was weak and thready at a rate of about 190. The blood pressure was systolic, 115; diastolic, 90. The chest was full of bubbling râles. The heart was moderately enlarged. The heart sounds were weak and the rhythm was *tic tac*. No murmurs could be heard. The Wassermann was repeatedly negative to all antigens. Electrocardiograms showed paroxysmal tachycardia of ventricular origin; the rate was about 190 per minute. When the rate dropped to 120, electrocardiograms showed normal rhythm with minute ventricular complexes suggestive of grave myocarditis. The heart rate again rose to 190 during the latter part of the patient's twenty-six hours in the hospital. Unfortunately, the electrodes could not be put on him in time to get the death curve, which may have revealed ventricular tachycardia passing into ventricular fibrillation.

Necropsy showed a thrombus completely occluding the anterior descending branch of the left coronary artery 1.5 gm. from its origin and extending 2 cm. along the vessel; also endarteritis and a gummatous-like lesion. The heart wall in the distribution of the vessel showed a definite forward bulge and was of a dull grayish color. The circumflex branch of the left coronary showed thickened walls and a reduction of the lumen to a diameter of 1 cm. The area of the heart wall supplied by this artery was fibrotic and atrophic.

A typical picture of vascular syphilis with (fibroid) myocarditis and coronary thrombosis with infarction of the ventricular wall.

#### SUMMARY

Six cases are presented, three of which were proven at necropsy to be coronary thrombosis.

The first case was one of angina major, such as the case of "Thomas Arnold," with death with the first breast pang. The second patient survived the attack but died of rupture of the degenerated necrotic ventricular wall, which had resulted from the infarction that followed the thrombosis. Electrocardiograms gave suggestive evidence of grave myocarditis.

Of the other four cases, the last one was proven to be coronary thrombosis at necropsy while the other three are highly probable cases. All had acute severe anginal attacks and presented high pulse rates, from 170 to 250 per minute, and characteristic electrocardiographic findings (paroxysmal ventricular tachycardia), which heretofore have been shown to be associated experimentally only. One case is still living two years after the attack. One died six months after the attack. One died six weeks after a sudden onset, with a persistent status anginosus without relief until death.

The last one died twenty-six hours after the onset of a terrific anginal attack. He had two long paroxysms of ventricular tachycardia. Necropsy showed thrombosis of the descending branch of the left coronary artery. This is the first clinical case on record substantiating Lewis' experimental facts. The other cases were similar in every way except that they were not checked up postmortem. The pulse rates ranged from 170 to 250.

Electrocardiograms are of considerable value in these cases, and they have thus called attention and fully explained a very important diagnostic and prognostic sign, that of tachycardia of from 150 to 250 occurring in paroxysms in cases with clinical symptoms of very severe angina, in which there is any question of coronary thrombosis.

Syphilis was the prominent etiologic factor in our series. Only one case had a positive Wassermann. Three at necropsy showed positive histologic evidence of syphilis. Three gave definite histories of "hard chancres." Four gave suggestively positive marital histories.

My thanks are due to Drs. George Dock, G. Canby Robinson and Frank N. Wilson. The description of the pathologic conditions are abstracts from the necropsy protocols of Dr. M. T. Burrows.

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#### TWO CASES OF BLINDNESS RELIEVED BY ETHMOID EXENTERATION—A CASE OF KERATO-IRITIS DUE TO TONSIL INFECTION \*

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ST. LOUIS

The first two cases which present features of unusual interest are reported to call attention to the rapidity with which serious eye symptoms may disappear after appropriate nasal treatment. Furthermore, the ready recovery from the serious eye lesions under the circumstances is as convincing of their nasal origin as anything could be, short of necropsy findings.

\* Read before the Middle Section of the American Laryngological, Rhinological and Otological Society, Cincinnati, Feb. 23, 1920.

The last case shows rather clearly a relation between iritis and tonsillitis that fits in well with the theory of the focal influence of the tonsil in rheumatism and allied conditions.

CASE 1.—*Bilateral Blindness*.—This case has already been reported by the writer.<sup>1</sup>

S. P. C., aged 16, referred by Drs. M. H. Post, M. A. Bliss and J. T. Harrison, April 1, 1912. He had suffered from great loss of sleep, intense supra-orbital pain and rapid reduction of vision, which began two weeks after the onset of the symptoms.

Examination revealed extreme sensitiveness in the region of the inner canthus above and below. Both inferior turbinates were of usual size with no swelling; the septum was quite straight; both middle turbinates were greatly swollen but no pus was discoverable until the middle turbinate area was cocaine-ized when a thin streak of pus was seen coming from the region of the orifices of the posterior ethmoid cells on both sides. Vision O.D. 1/192, O.S. 3/120; swelling of the disc O.D. + 4, O.S. 6.

The anterior and posterior ethmoid cells on both sides were exenterated. The improvement that followed was immediate and progressive as well as extraordinary and with it the headaches entirely disappeared. The progressive improvement is well shown by the examinations made by Drs. Post and Shahan.

	O. D.	O. S.
August 1. On admission...	1/192	3/120
August 3. After operation...	3/75	3/12
August 4.....	10/38	10/19
August 5.....	10/24	10/19
August 6.....	10/15	10/15
August 8.....	20/24	20/24
August 29.....	20/12	20/19
September 18.....	20/15	20/15
December 14.....	20/12	20/12

The swelling of the disc showed progressive recession from O.D. + 4 D., O.S. + 6 D., on August 1, to + 1 D. both eyes on August 29. This case appears analogous to that of edema glottidis supervening on an adjacent infection. The patient was really in a most serious condition, the intense headache and increasing blindness being almost sufficient to rob him of his mentality. The early and complete relief was one of the most startling experiences of my practice.

CASE 2.—*Unilateral Blindness*.—R. H., aged 23, referred to me Jan. 31, 1918, by Dr. Wiener. Three days before, the vision of the right eye became suddenly blurred. When the first examination of the eye was made there was no evidence of any external ocular trouble.

Vision, O.D.: perception to light limited to the upper field. O.S.: 20/20. Fundus: Right; media clear; disc red, outline hazy, almost obliterated; central excavation cannot be made out; veins large, dark and tortuous; arteries tortuous; no hemorrhages: top of disc 3 D. Left, normal.

Examination of nose revealed the right middle turbinate thickened, swollen and in contact with the septum, a small amount of pus being visible coming from the inferior and outer surface of the middle turbinate. Left middle turbinate thickened but much less than the right.

Application of cocaine had a startling effect as the vision immediately improved. On the following morning Dr. Wiener found the disc much less swollen, the patient being able to count fingers at 4 feet. On the following day cocaineization had a similar effect on his vision. For this reason it was deemed advisable to resort to mild local applications for a few days. Progressive improvement followed and two weeks

later (February 14) the ethmoid cells on the right side were exenterated. The progressive improvement in vision is shown in the following results of examination by Dr. Wiener:

January 31: Disc red, outline hazy, almost obliterated. Vision perception of light limited to upper field.

February 3: Less swelling, O.D. V. 14/120.

February 6: Less swelling. Small hemorrhage seen just above disc along superior nasal vein. O.D. V. 14/65.

February 9: Disc still clearing. O.D. V. 14/40.

February 12: Very little disc swelling. O.D. V. 14/25.

February 14: Operation.

February 17: Disc almost clear. O.D. V. 14/25.

February 24: O. D. V. 14/20.

March 3: O.D. V. 14/16.

March 10: O.D. V. 14/13. Disc clear.

While the improvement in this case was well established before the operative procedure was undertaken we may justify the theory of nasal origin on the following:

1. The immediate improvement in vision following each application of cocaine, during the first ten days of observation.

2. The progressive improvement under mild local treatment of the nose.

3. The complete restoration of vision after operation.

CASE 3.—*Kerato-Iritis, Acute Tonsillitis, Hypertrophy of the Tonsils*.—H. L. E., aged 21, referred Sept. 15, 1919, by Drs. Wiener and Lipsitz, had been treated for an acute infectious bronchitis three weeks before from which he made a good recovery. He had previously never had any serious disease. Denies any venereal infection. His mother had inflamed eyes during the past week which recovered without incident.

General physical examination by Dr. Lipsitz showed heart, lungs and abdomen negative; cervical glands slightly enlarged; few small papules about genitalia which do not appear venereal; blood pressure 130-80; urine negative; white cells 8,700; hemoglobin 88 per cent.; differential count normal; Wassermann negative.

The eye symptoms began three days before, a kerato-iritis appearing in the right eye at the time and in the left eye on the next day. The photophobia was intense, the pain almost unbearable. Coincidentally he complained of pain in his throat. He also had been having an elevation of temperature. Examination showed hypertrophied inferior and middle turbinates, evidently of long standing but no pus; markedly enlarged tonsils which with the mucosa of pharynx were swollen and quite uniformly reddened.

The usual local and constitutional treatment of the tonsil and pharynx inflammation was quickly followed by relief of the eye symptoms, which was marked by the third day. From this time on he improved progressively so that it was deemed advisable to remove his tonsils. This was accordingly done on September 19. He recovered without incident. On September 24 there was still a small ulcer at the supero-internal quadrant which readily disappeared under application of a 1 per cent. solution of optochin. Since this time the patient has been free from any trouble.

This patient's experience while in no sense conclusive is quite convincing. The onset and progress of the affection are singularly comparable to that of an iritis with a rheumatic

1. Loeb, H. W.: The Influence of the Nose on Eye Affections as Evidenced by a Case of Bilateral Blindness and One of Unilateral Scintillating Scotoma Cured by Operation on the Ethmoid Cells, *Ann. Otol., Rhinol. & Laryngol.* (Dec.) 1914.



basis and the throat inflammation was also quite characteristic of that which is a frequent accompaniment of acute articular rheumatism. May we not consider this an oculo-tonsil-rheumatism complex in which the arthritis was for some reason absent?

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## A REVIEW OF THE SURGERY OF GONORRHEA IN THE MALE\*

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It is not the purpose of this paper nor the intent of the writer to consider the palpably surgical aspects of gonorrhea and its sequelae but to point to the fact that the majority of cases of this disease, unless properly treated from their inception by competent hands, become surgical in character and as such finally drift into the hands of the urologist; and at the same time to review and coordinate the multiplicity of ideas which have appeared in the literature in the last few years.

Without further introduction, we will make the bold statement that a gonorrhea which has existed for a period of at least six weeks has invaded the posterior urethra and the moment this part of the seminal tract is invaded the disease becomes surgical in character in at least 85 per cent. of all instances. By this statement it is not meant that nonsurgical measures will not accomplish a cure in a certain percentage of cases, but we do not hesitate to make the statement that even in this percentage, cure will be much hastened and made more certain by surgery intelligently applied.

Oppenheim and Low, in experimentation on rabbits and guinea-pigs, found that by stimulation of the hypogastric nerve there was set up a reverse peristalsis in the vas. They justly argue that any irritation, such as may be caused by an infectious process in the prostatic portion of the canal, will cause a descending infection into the vesicles, vas and epididymis. To the contrary, Baumgarten and Kramer, studying urogenital tuberculosis, conclude that there is no backward extension down the vas, due to the constant upward flow along the vas and the presence of ciliated epithelium. Teutschlander states that ciliated epithelium exists in the tubules of the epididymis but not in the vas and that, due to the great difference in the structure of the genital adnexa in man and in rabbits, no definite conclusions can be drawn.

Clinically, it is quite evident that the tendency of the gonorrheal process is up the urethra to the prostatic portion and from that point into the vesicles, and, in about 10 per cent. of all

gonorrheas, down the vas and into the epididymis. With the adnexa once invaded, cure by conservative measures becomes extremely difficult and most uncertain, and it is in this type of stubborn infections that surgery properly directed, has given most brilliant results.

*Surgery of the Vas and Vesicles.*—Surgery of the vesicles for gonorrheal involvement of the adnexa dates from the work of Fuller who, in 1900, published his technic for drainage in a series of five cases. His claims were modest and he stated that he believed his operation of vesiculotomy to be applicable to aggravated cases of infection. Later the same writer reported a series of 700 cases with one death, claiming brilliant results for the operation.

In 1905 Belfield first suggested treatment of the gonorrheally diseased vesicles by opening up the vas through an incision in the lateral wall of the scrotum and injecting the desired medication upwards through the vas into the vesicles. The operation of Belfield, as first described, was a thorough exposure of the vas for about a distance of 0.75 inch, which was then completely divested of its fascial investments; a longitudinal slit in the vas to expose its lumen, into which was threaded a strand of silkworm gut to determine the patency of the vas and its freedom from stricture; the insertion into the lumen of a blunt-pointed needle attached to a syringe, and the injection of about 5 c.c. of a silver salt. The vas was again rethreaded with a strand of silkworm gut for drainage and to prevent regurgitation. If repeated injections into the vesicle were desired, the edges of the slit were sutured to the scrotal wound. This final part of the technic—the suturing of the open vas to the scrotal wound, in other words, vasostomy—has been abandoned by all operators in so far as we are aware.

Thomas of Philadelphia in 1916 modified the technic of Belfield markedly, making a puncture in the vas instead of an incision. He determined the actual presence of the needle in the lumen and permeability of the vas by injection of sterile water. This same author speaks of the danger of regurgitation and a chemical funiculitis and emphasizes the necessity of preventing such regurgitation, which he does by means of a catgut suture in the vas obliterating, as he assumes, temporarily its lumen below the point of puncture. The same author questions whether or not stricture of the vas may follow incision into the structure.

Personally, we are of the opinion that post-operative funiculitis and epididymitis are due to faulty injection into the sheath of the vas rather than into its lumen and that the dangers of stricture are less by Belfield's method than by that of Thomas. Belfield has lately modified his method to conform somewhat to vasopuncture. He still adheres to the original silkworm gut drain to prevent regurgitation and deter-

\* Read at the Sixty-Third Annual Meeting of the Missouri State Medical Association, Jefferson City, April 6-8, 1920.

mines the permeability of the vas to solution injection by means of the initial injection of 10 c.c. of 1:25,000 methylene blue solution, the appearance of this in the voided urine establishing such permeability. The injection of sterile water for the same purpose has been suggested by the same and other authors.

Thomas (*vide supra*) has shown that on injection the vesicles fill from below upwards and that some distension is noted with the injection of 3 c.c. of fluid and that there is no escape of fluid until the vesicle becomes filled. As the purpose of injection is the reaching of the entire lumen of the vas and the cavity of the vesicle and the distension of this cavity *with the fluid employed for medication* and as there is no overflow until the vesicle is completely distended, this distension taking place from below upwards, it must follow that the preliminary injection of a diagnostic fluid (sterile water or dye) must defeat the ultimate object of the operation unless the vesicle be completely emptied by massage of the retained fluid before injection of the medicating solution. This holds equally true of a vesicle containing vesicular fluid, so that an essential to successful vasotomy with injection is the immediate preliminary emptying of the vesicular sac.

R. Herbst and Bentley Squier conclude that stenosis of the ejaculatory duct is responsible for the continuance of infection in the vesicle. Granting this to be true, it follows that vasotomy with injection alone, in this type of case, will not be productive of results. At the 1904 meeting of the American Urological Association we were, we believe, the first to present dilatation of the ejaculatory ducts via the endoscope as a practical procedure, with injection through the ejaculatory ducts into the vesicle. In 1918 Wolbarst and Luys (*Urologic and Cutaneous Review*) again published the procedure as original with them. After many years of experience in practicing or attempting to practice this delicate operation, we say frankly that in an overwhelming majority of instances this procedure is not practicable and especially is this so in the very class of cases in which it is most important to apply it, i. e., in stenosis of the ejaculatory duct. The time honored treatment for such a condition is the one to be selected, i. e., the rectal thermaphore, prostatic and vesicular massage and the topical application of silver nitrate to the veru through the endoscope.

A consideration of vasotomy or vaspuncture is impossible without a coincident consideration of vesicular disease and a careful differentiation of cases suitable for vas injection as against those in which vesiculotomy or vesiculectomy are indicated.

While Fuller and Belfield, together with Pierre Duval, pioneered in the surgery of the gonorrheal vesicle, it was not until Picker

(*Urologic and Cutaneous Review*, September, 1913) presented his exhaustive anatomic and pathologic studies of the vesicles that the true significance of vesicular infection was brought out. In an exhaustive anatomic differentiation compiled from seventy-two necropsies, he found only 4 per cent. of simple straight tubes without diverticula, 30 per cent. twisted tubes without diverticula, and approximately 33 per cent. of diverticulated and racemosed vesicles, the remaining 33 per cent. consisting of short tubular vesicles with large irregular ramifications making practically 66 per cent. of all cases (in which infection might occur) most unlikely to be amenable to conservative treatment.

Following this anatomopathologic survey, interest was greatly revived in direct attack on the vesicles themselves, and Squier, Schmidt and others advocated open operation by the perineal route with drainage of the infected vesicles.

J. Dellinger Barney found in quite a series of cases that in the presence of infection of the vesicle cavity itself there was also a large deposit of connective tissue in the wall of the vesicle itself producing atrophy of the muscle bundles and deteriorating and obliterating the glandular cavity. Further studies by the same author were productive of the fact that while no culture could be obtained from the vesicular contents in such cases, cultures of the wall itself were positive. His work in this particular conformed to the reports of Rosenow on the stomach and appendix.

In 1916 E. W. White emphasized these facts, calling attention to the futility of vesiculotomy in such cases and suggested vesiculectomy as the operation of choice.

In 1917 Thomas and Harrison, in a review of fifty-two cases, stated that fourteen cases of vesiculitis showed azoospermia. The same authors and others have shown the difficulty in demonstrating the gonococcus, mixed infection being usually present.

Based on the studies of Barney, the conclusions drawn by White seem to us most logical. He divides vesicular infection into four divisions: (1) acute catarrhal vesicles in which the vesicles are very large and distended; (2) fibrosed or sclerotic vesicles; (3) suppurating; (4) the paninflammatory type with a general massing of the adnexa. He says that direct attack on the vesicles should be (1) for relief of pain; (2) for the evacuation of pus (Type 3), and (3) vesiculectomy for the hard indurated vesicles described by Barney and those cases in which the vesicle and ampulla are giving rise to ureteral symptoms. To this classification Squier adds arthritis, recurrent cases of epididymitis, and certain cases of spermatorrhea. The latter writer while admitting perivesiculitis and the classification of Barney, nevertheless advises vesiculotomy rather than vesiculectomy. For determination of type



Barney, Belfield and others have suggested radiography by means of injection through the vas of some opaque fluid as collargol.

*Epididymitis.*—We are of the opinion that there is no one other complication in gonorrhea which has been so sadly neglected from a surgical standpoint by the profession in general as epididymitis, though urologists have repeatedly called attention to the value of surgery in this particular complication. Surgical attention to epididymitis was first directed by Pirogoff who in 1852 suggested puncture of the tense epididymitis. In 1863 H. Smith reported the first radical surgery of the epididymis for gonorrheal involvement, i. e., open operation. Later this same author reported the astounding series of 1,000 cases on which epididymotomy had been done. The operation may be said to have fallen into disuse until revived by Bazet who was closely followed by Hagner, whose work in this particular may be said to have placed the operative treatment of epididymitis on the plane to which it belongs. At this time Hagner based his conclusions on the exhaustive treatise of Monod and Terrillon, who came to the following conclusions:

1. In gonorrheal disease of the testicle the epididymis alone is involved.
2. There is a marked dilatation of all the tubes of the epididymis, which they believe to be due to the pressure caused by the infiltration of the inflammatory exudate into the connective tissue surrounding the tubules, resulting in more pressure at one point than another, and hence the obstruction produced causes a backing up of the degenerated epithelial cells, pus, refractive granular material and spermatozooids.
3. Such obstructions have been known to lead to the most distressing degeneration of the seminiferous tubules with resulting atrophy of the testicle.

Experimentation by Hagner and Kocher apparently bore out the conclusions reached by Monod and Terrillon though in a paper as yet unpublished and presented at the 1920 meeting of the American Urological Association, Cunningham of Boston showed that there is a direct empyema of the epididymal tubules themselves with a consequent rupture into the surrounding connective tissues giving rise to the picture described by Monod and Terrillon and later by Hagner. This empyema of the tubules unquestionably destroys their continuity with resulting paratubular infiltration. From these studies but one conclusion may be drawn and that is, that any hope for the restoration of this continuity must depend on surgery properly applied and allowing of drainage of the surrounding connective tissue spaces.

There is apparently very little difference of opinion among urologists as to the application of judicious surgery to gonorrheal epididymitis though there has apparently arisen in the literature quite erroneous ideas as to the method of its application. While it is the purpose of the operation suggested by Hagner, Cunningham

and others, not merely to relieve pain in the epididymis but, at the same time, to preserve its functioning power, this latter and most important phase seems to have been overlooked by quite a number of writers. Walther resorted to multiple puncture as against open operation, while Merritt, as late as 1915, made stab punctures with a knife into the diseased epididymis. Both methods are blind ones and Merritt's method is absolutely unsurgical and should never be employed.

The ideal method of procedure is one which will accomplish relief of pain with evacuation of the accompanying hydrocele and purulent foci and which, at the same time, will preserve as nearly as possible the tubular integrity of the epididymis and allow of adequate drainage. Baerman concludes that suppuration and hydrocele occur in the vast majority of cases. In the series reported by Cunningham 67 per cent. showed gross pus and 33 per cent. microscopic pus.

In our opinion, the operation as suggested by Hagner and modified by Plaggemeyer seems best suited to the majority of cases, though there seems to be but little doubt that in the rapidly fulminating cases which have progressed too far for simple epididymotomy and in recurrent cases in which there is no doubt that the epididymis has become useless and purely a menace, epididymectomy should be employed rather than incision and drainage and in these two classes of cases we have found radical removal most satisfactory.

#### CONCLUSIONS

Based on the work of the above authors and on a series of 167 vesiculotomies and six vesiculectomies performed by ourselves together with several hundred operations on the gonorrheal epididymis, we have reached the following conclusions:

1. In those cases of persistent gonorrhea in the male in which there is proven involvement of the seminal vesicle without frank pus therein or marked pain (perineal or rectal), and in which no marked fibrosis has taken place, or in which there is no accompanying arthritis, vasotomy following the technic of Belfield should be employed with the injection, preferably, of a collargol solution.

2. In cases of vesiculitis showing frank pus, or where the vesicles do not strip easily and in which there is no marked fibrosis, or in which arthritis is present, vesicle drainage following the method of Squier is the advisable operation.

3. In cases showing fibrosis with perineal or rectal pain and accompanied or unaccompanied by arthritis, vesiculectomy is the operation of choice.

4. In cases of acute gonorrheal epididymitis which do not show a marked subsidence of pain,

temperature and swelling within forty-eight to seventy-two hours from onset under proper rest in bed, application of the ice-cap and supportive measures, epididymotomy should be performed. This operation should never be performed without an accompanying vasotomy as described above.

5. In recurrent cases of epididymitis or in cases of acute epididymitis showing marked areas of beginning necrosis or in those recurrent cases in which there has been sufficient fibrosis to utterly preclude resumption of function on the part of the epididymis, epididymectomy is the method of choice.

A final word as to vasotomy, with special reference as to its technic:

It is highly important that the vesicles be thoroughly emptied by stripping immediately preceding operation and that no fluid be injected into the vesicles other than that to be used for medication. It is equally important that the vesicles be filled to the point of uncomfortable distention in order that the purpose of the operation may be accomplished, i. e., so distending the vesicles as to reach all of the vesicular ramifications. In order to accomplish this we have employed the following addition to the usual technic: After opening the vasa and determining their patency by means of a strand of silkworm gut, the index finger of an assistant is put into the rectum and pressure made over the urethral portion of the prostate sufficient to secure a closing of the ejaculatory ducts. Injection into the vas is now made until the patient complains of a pronounced sense of fullness in the rectum. The amount of medicating fluid to be used will be found to vary from 10 to 30 c.c. We consider this addition to the technic to be of importance.

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#### DISCUSSION

DR. C. E. BURFORD, St. Louis: Dr. Mark's paper is interesting, his slides very good, and I agree with him in saying that his title is rather a misnomer. I think we get a wrong idea of what he intended to show us by calling it "Surgery of Gonorrhea." If he means that 85 per cent. that exist for six weeks are surgical in the sense that surgery is necessary to cure, I heartily disagree. Some authors say that 90 per cent. of men have gonorrhea in their lifetime. If 85 per cent. become surgical there would not be enough surgeons in the country to care for these cases, but I cannot believe this is so.

Surgery of gonorrhea differs from other surgery in one respect. Mixed infections, particularly streptococcus and staphylococcus and colon bacillus under pressure, become dangerous. We must have drainage immediately because the infection becomes more powerful when confined. Not so with gonorrhea. The gonococcus has the peculiar property of dying out if taken up by the tissues. All urologists have had the experience of opening a periurethral abscess that was caused by the gonococcus, slides of which showed no organism at all. In other words, the gonococcus as soon as it found its way into the tissues

disappears because of the resistance of the antibodies that are formed in that locality.

Manifestly it is impossible to drain all the little convolutions of any of these vesicles; you cannot drain them perfectly because you cannot drain the whole vesicle, and if you cannot drain the entire vesicle it is not much use to drain any of them. One injection of a gonocide into the vesicle will not clear it up completely for the reason that it is a glandular organ. The only kind of viscus that can be sterilized by one injection is one that has no glands, for instance, the pelvis of the kidney. So I believe that instead of surgery doing the work in gonorrhea it is really the resistance of the tissues. In stripping the prostate we are cleaning out the pus, we are stimulating the circulation and will get more reaction locally, and we are stimulating the antibodies and in that way the disease is gradually cured.

I believe a large percentage of these cases can be cured by massage and careful use of instruments. I think Dr. Mark has brought out an interesting subject, and while I cannot agree with him entirely. I think it is a subject that should be discussed very fully.

DR. H. MCCLURE YOUNG, St. Louis: This is a very important subject, and as I have had an opportunity to observe the results in some of these cases I thought it would be interesting to report some of my impressions.

In the first place, it is important that we select cases properly for this procedure. A case where the gonococcus has disappeared and you have a chronic, gleet discharge, even if you can prove definitely that it comes from the seminal vesicles, is not very greatly benefited by this procedure. I have seen cases where we did the operation because there was some other indication for it, and while the complication has been helped the discharge has continued. Where the gonococcus is still present we have gotten some of the most prompt and striking results. We have had striking results in cases of arthritis. That inflammation of the seminal vesicles can be cured without this has been fully proven. I remember one case, a man who had the disease for more than six months, constantly recurring, and when he came to me he was very much discouraged. But simple systematic massage with irrigation did clear it up in three or four months of treatment and his prostatic secretion was free from pus. This man was married and he had acquired the disease while in swimming, apparently from a borrowed bathing suit. We had his statement and his family physician who knew him intimately was willing to vouch for it. It was very important that he should be definitely cured. Therefore, I did in his case what I do not do in many cases, I gave him some rather strong irrigations to see if a relapse would occur, but nothing of the sort happened. He has had sexual relations with his wife, with proper precautions that she be not infected, and no relapse occurred. That has been the condition now for as much as two or three months. I have not seen him for a month but I am sure he has not had the slightest sign. That was a case we had an opportunity to follow through. I feel confident that man is cured.

We are asked whether this procedure will always cure. I had another case where the patient had an epididymitis, a very large vesicle, and his urine was cloudy; this had been going on for six months. The operation of vasapuncture was performed. Immediately the urine became clear and the urethral discharge ceased.

There was one complication in this case. The man had a colic after the injection, which sometimes happens. I think probably a little too much pressure was used—something we endeavor to guard against by passing a silkworm gut as the essayist described. The point I wish to make is that although this man



clinically recovered, left the hospital, went back to work, and was free from a discharge for two or three months, the swelling in the vesicle remained, although it was much smaller and could be emptied by massage. But he came back with a discharge the other day after having bruised himself in starting an automobile, and the smear showed the gonococcus still present. There was a case where you got a beautiful result clinically, but the gonococcus was not exterminated.

DR. NEIL S. MOORE, St. Louis: I agree with Dr. Burford as to the surgery, but I am sorry that Dr. Mark did not get to finish his paper because I would like to hear more about this subject. I should like to ask Dr. Mark how often and what per cent. solution he injects and, if the patient is in the hospital more than once, how often he injects him? I know that in the case of the bladder or any other hollow organ that is infected with the gonococcus, one injection, or even two or three, will not suffice.

DR. E. G. MARK, closing: I can only say that I have been very grateful for the discussion of Dr. Burford and others and I might say that I have been equally astonished as to the stand taken. I do not think that I have over-exaggerated when I say that at least 85 per cent. of the cases which persist for six weeks, are truly surgical in character.

There is unquestionably a certain percentage of mixed infection in which the gonococcus is not found in the chronic condition but it is equally true that a certain percentage exists in which the gonococcus is most persistent. Just Saturday I saw a case where the patient had his original infection over seven years before with recurrent attacks ever since. Gonococci were found present in this case.

Dr. Moore asks if one injection is sufficient to clean up the infection? Properly done one injection is sufficient. Unquestionably, massage and the use of a thermophore are the greatest aids we have and will in a certain percentage of cases, combined with other methods, produce a cure, but I do say that you can cure a vesiculitis of long standing in three weeks; yes, you can cure it in ten days to remain cured by properly giving vas injections.

I no longer do vesiculotomies. In the average case it will also be seen, if one follows the paper, that vesiculotomy in certain cases will not be productive of results on account of the fact that the infection has invaded the vesicle wall. Such cases require vesiculectomy beyond question.

#### BIBLIOGRAPHY

1. Aschcraft: *Am. Pract.*, 1913.
2. Baumgarten and Kramer: *Geb. d. Path. Anat. Inst. zw. Tübingen*, 1902-1903.
3. Barney: *Boston M. & S. J.*, 1910.
4. Barney, J. Dellinger: *Tr. Am. Assn. G. U. Surg.*, 1914.
5. Baerman: *Deutsch. med. Wchnschr.*, 1903.
6. Bazet: *Ann. d. mal. d. org. genito-urin.*, 1906.
7. Belfield: *J. A. M. A.*, 1905.
8. Belfield: *Surg., Gynec. & Obset.*, 1913.
9. Belfield: *J. A. M. A.* (Jan. 17) 1920.
10. Fuller: *J. A. M. A.*, 1900.
11. Fuller: *Med. Rec.*, 1915.
12. Hagner: *Med. Rec.*, 1906; *Ann. Surg.*, 1908.
13. Herbst, R.: *J. A. M. A.*, 1912.
14. Jost, W. E.: *Med. Fortnightly*, 1915.
15. Macht, D. I.: *J. Pharmacol. & Exper. Therap.*, 1916.
16. Merritt: *J. A. M. A.*, 1915.
17. Oppenheim and Low: *Virchows Arch.*, 1905.
18. Plaggemeyer: *Urol. & Cutan. Review*, 1916.
19. Pickner: *Urol. & Cutan. Review* (Sept.) 1913.
20. Smith: *London Lancet*, Vol. 2.
21. Squier, Bentley: *Cleveland M. J.*, 1913.
22. Teutschlander: *Betr. d. Klin. d. Tuberk.*, Vol. 5, 1906.
23. Thomas: *Tr. Am. Urol. Assn.*
24. Thomas and Pancoast: *Ann. Surg.*, 1914.
25. Thomas and Harrison: *J. Urol.*, 1917.
26. Waddell, J. A.: *J. Pharmacol. & Exper. Therap.*, 1906.
27. White, E. W.: *Urol. & Cutan. Review*, 1916.
28. White, E. W.: *Illinois M. J.*, 1916.
29. Walther: *Med. Rec.*, 1915.
30. Wolbarst: *Urol. & Cutan. Review*, p. 459, 1918.

#### ABDOMINAL SYPHILIS\*

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In the years prior to 1905 syphilis was observed only from clinical and pathological viewpoints. Specific laboratory tests applied to patients were not then available. The predominating characteristics of the Hunterian or true chancre had been taught and repeatedly described by teachers in medicine; its appearance ten to twenty-one days after contact; the indurated base; the painless enlargement of nearby lymph glands; the single lesion character without marked ulcerative tendency—such were the diagnostic features of the primary lesion. In the secondary or the eruptive stage coming in six or eight weeks thereafter, were the slight fever, the aching bones, headache, sore throat, with a more or less widespread eruption on the skin and mucous membrane. Thus were known lesions—erythematous, macular, papular, pustular, with mucous patches on mucous membranes or other moist areas. Generalized adenopathy marked this stage. Then, a variable period elapsing, rupial forms ensued with extensive surface ulcerations. Bony syphilomas with subsequent absorption and destruction; necroses of nasal septum, and palate; such were the features of the so-called tertiary stage, the stage of destruction and scar formation.

Syphilitic neoplasms in brain, bones and liver were recognized and treated with fair success. Vascular changes, such as aneurism, aortitis and so forth, together with the so-called parasymphilitic neuropathies, tabes and paresis, though of questioned etiology, had been fairly well established in their proper syphilitic category. With the discovery of the *treponema pallidum* by Schaudin in 1905, and the publication and widespread employment of Wassermann's reaction, the old story of syphilis, while retaining some of its chapters intact, has been rewritten in many important details. Furthermore, new and extensive territories have been scientifically explored, and an expanse of syphilis in the ailments of the human organism has been disclosed which to most of us seems incredible. No longer do we trust in the clinical differentiation of venereal sores. Whether typical chancres or of the chancroidal ulcerative type we regard them for the most part as syphilitic, striving for an immediate diagnosis by a search for the micro-organism, thereby in most instances saving weeks of precious therapeutic time before the infection has become generally established in the system. Like antitoxin in diphtheria, one early dose of arsphenamin and thorough dosage with mercury are worth ten courses of treatment at a later date. Nor do we sit compla-

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cently waiting for the secondaries, which in numerous instances either do not appear or else escape detection. Many a paretic, tabetic, cardiovascular, or abdominal breakdown from syphilis, gives no history of secondaries though a venereal sore may possibly be remembered. A confirmatory Wassermann following a suspicious sore saves the necessity of further evidence.

A year ago it was my privilege to present to our local society a group of seven patients, with additional postmortem specimens, showing the cardiovascular ravages of syphilis. All of them were wrecks beyond the reach of successful therapy. Other cases were cited showing the earlier phases of these maladies, the early manifestation of cardiac syphilis. The contrast between the early and the late was particularly emphasized because in the early recognized cases of cardiac syphilis appropriate treatment effects the happiest results. Unfortunately, physicians are slow to admit cardiovascular syphilis until aneurysmal or marked aortic changes have occurred, whereas a year or so previous to these changes, precordial uneasiness, slight arrhythmia, an unstable blood pressure, with a ++++ Wassermann, should have sufficed. To put it somewhat dogmatically, cardiac disturbance in middle life without rheumatic history, without evident infection or thyroid upset, spells syphilis.

Pursuing somewhat the same lines in clinical research, prompted by the testimony of other clinicians, and encouraged by the unraveling of cases otherwise inexplicable and intractable, we have in recent years approached the study of our abdominal cases with the idea that they, too, may have an underlying syphilitic factor. Disregarding for the present the protean characteristics and variable symptomatology of syphilis of the alimentary viscera the diagnosis rests on these supports:

1. A definite history of syphilis in former years.
2. Scars in bone, in skin, in scalp, in eye, in nose, in throat, the relics of a former active phase.
3. Pupillary inequalities, Argyll Robertson phenomenon, and other disturbances of spinal reflexes.
4. A marital history of spontaneous abortions and stillbirths.
5. A family record suggesting syphilis.
6. The confirmatory tests of the blood and spinal fluid.
7. The improvement under antisyphilitic treatment.

In reference to the fifth, or family history, suggesting syphilis, the vast majority of our experiences have dealt with adults. In children this information is all important. Yet hereditary syphilis is not to be ignored in grownups,

for we have seen cases that were probably hereditary showing up in adults, in one instance as late as the forty-eighth year. This man's mother had been a victim and he had no knowledge of any additional infection. His Wassermann and therapeutic test proved strongly positive.

Not all of these diagnostic supports of course are essential for every case. Any one of the first five may be even vaguely present, with a positive Wassermann and positive therapeutic test, and the diagnosis is warranted. Per contra, even with forceful indications, unless the therapeutic test is successful, the diagnosis must often be held in abeyance.

Reference has been made to the protean and multifarious symptomatology of visceral syphilis. At times other well known disorders are closely mimicked; at other times the symptom display is so bizarre, so contradictory, as to make no end of confusion. Illustrative of abdominal cases a few outlines are here presented:

CASE 1.—P. F., aged 35; acute abdominal pain, with tenderness, fever, leukocytosis, and so forth. Appendicitis is diagnosed and operation performed. Ten or twelve years prior to this the patient had severe outbreak of syphilis with extensive scarring. The appendix was normal.

CASE 2.—Mr. B., aged 60. Research Hospital. Dated abdominal distress from a fall from a horse six months previous. Anemia and cachexia are present; also a mass in the right hypochondrium, size of coconut. Condition has every aspect of malignancy. Wassermann is ++++. Recovers completely under treatment.

CASE 3.—Mr. G., aged 49. Research Hospital. Repeated attacks of hepatic colic, slight icterus, and so forth. Operated. Syphilis and alcoholism both very definite in this case. No gall bladder trouble is found. The liver is markedly cirrhotic, hob-nail surface with deeper fissures here and there. Evidently a syphilitic cirrhosis.

CASE 4.—Mrs. A., aged 33. Wesley Hospital. Married at 16. Miscarriage. No living children. Six years previously abdominal attacks began. After two years appendix is removed. No relief. Another laparotomy, 1915. No relief. Present condition: Great emaciation, mental confusion, and unconsciousness; persistent vomiting, becoming stercoraceous; irregular pupil; ++++ Wassermann; moribund appearance. Salvarsan and mercury restored this woman to her usual strength and work with a gain of 40 pounds in weight.

CASE 5.—Pat M., aged 30. Research Hospital. Violent gastric attacks with pain and vomiting, inactive pupils, knee jerks absent. History of sore and positive Wassermann. Tabes, simulating peptic ulcer or appendicitis.

CASE 6.—Mrs. M. (colored), aged 43. In 1917 hepatic colic. Cholecystotomy with removal of stones and drainage. In 1918, further attacks followed by a cholecystectomy. Shortly afterward icterus appeared, which has persisted. February, 1919, hemorrhage of gums from intense jaundice. Loss in weight and irregular nodulation of liver plainly felt. One positive Wassermann. Case was supposedly carcinoma of the liver. The two years' illness being too long for malignancy the therapeutic chance was taken. Inunctions of mercury with iodids have lessened the woman's jaundice, she has gained in weight and strength. No longer is she bedridden; in fact, she has become a sort of



helper about the hospital ward. She has lost the look of malignancy.

CASE 7.—W. S., aged 35. Research Hospital. Eight weeks ago pain and distress after eating which persisted until emaciation and prostration were evident. No free HCl at any examination. Total acidity very low. No occult blood in stomach or stools. Roentgen-ray diagnosis of probable duodenal ulcer, which the case greatly simulated symptomatically. The Wassermann was +++. A week of routine ulcer treatment gave no relief. Specific treatment brought a prompt improvement. Now on full diet after three weeks with weight rapidly approaching normal.

CASE 8.—P. F. C., aged 60. St. Mary's Hospital. Stomach trouble for several months. Pain, distension and recurrent vomiting; marked emaciation and cachexia. Tumor mass easily palpable in epigastrium. Stomach contents those of cancer. Blood in vomit and stools. Roentgen ray as shown in plate. Definite history of lues in former years. Papular syphilide recognized on forehead. Wassermann +++++. A series of arsphenamin injections cleared this man's skin, relieved his stomach symptoms somewhat, improved his general health, increased his weight. The improvement was of short duration. Five or six months later we heard of his death with all the symptoms of a progressive malignancy.

CASE 9.—P. B., aged 35. Outpatient Research Hospital. Two years ago stomach trouble; after treatment was better until February, 1919, when trouble returned. Stomach resected at Bethany Hospital in March, 1919. No relief. St. Mary's Hospital, tonsils and appendix removed. No relief. Patient gives history of syphilis and has a +++ Wassermann.

R. S. Thompson<sup>1</sup> reports that in 700 routine necropsies in adults from municipal sources, two-thirds showed gross lesions of syphilis. Warthin of Ann Arbor in necropsies from a rural community covering a period of two years, found syphilis in one-third of adult cases. Probably both their figures are extreme in so far as the general incidence of syphilis is concerned. It may then be conjectured that in 50 per cent. of adults dying of promiscuous causes, lesions or evidences of syphilis are present. If this generation is one-half tainted with syphilis, admitting the influence of syphilis in heredity, then by simple arithmetic only one-fourth of the next generation would come from a percentage free from syphilis. The only safeguard against this toboggan slide toward physical degeneracy is the saving fact that syphilitic marriages are frequently sterile. Certainly the omnipresent possibilities of clinical syphilis are emphasized by these statistics and by these case reports.

Brown and Gaither<sup>2</sup> of Baltimore conclude an article on syphilis of the digestive tract with the following remarks:

We feel that we have shown in this presentation of cases studied by us with great care during the past few years that syphilis plays a very much more important rôle in gastro-intestinal pathology than is usually supposed. When one realizes, as we have shown, that carcinoma or ulcer of the stomach, various

functional or organic dyspepsias, may be absolutely duplicated by syphilis of the stomach, while the parasymphilitic tabes may present the most variable gastro-intestinal syndromes—here violent epigastric pain, suggesting perforating ulcer or gallstone colic, here intractable nausea and vomiting, here colonic crises which almost duplicate in symptomatology either acute appendicitis or acute enterocolitis, while in other cases periodic attacks of the most profound diarrhea may be met with—it should make us realize that we should always be on the alert for manifestations of this disease either in the past history, or in the complete physical examination of the patient. We feel sure that if such possibilities are thought of, if the history is taken carefully, if the physical examination is complete, with of course careful studying of the blood, or even of spinal fluid if indicated, an increasing number of gastro-intestinal lesions regarded as due to other causes will, in reality, be shown to be syphilitic in origin.

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### THE PRESENT STATUS OF NITROUS OXID-OXYGEN ANESTHESIA\*

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One of the most important medical advances in the past few years is the tendency towards specialization of anesthesia. With the advent of local, spinal, scopolamin and morphin anesthesia, nitrous oxid, and the various methods of administering ether and chloroform, the field has become too broad and complicated for the man who gives an occasional anesthetic.

To discuss the present status of nitrous oxid anesthesia it is necessary to go into details of physiology, apparatus, and technic; for there is no other anesthetic so dependent on attention to details for its success. Its mechanical handling is of great importance and difficult while the fact that it is a selective anesthetic not applicable to all surgical operations makes experience and knowledge of its action a valuable asset in its success.

It has been some eighty years since nitrous oxid was introduced as a general anesthetic but not until recently has it secured popular recognition and the profession readjusted the views gained when apparatus was crude and deep cyanosis thought to be essential to the establishment of anesthesia. With more experience in its administration there has been opened to the anesthetist a wider field for its use, to the surgeon the contentment of seeing better post-operative results and to the patient no nightmare memories of a stormy postanesthetic recovery.

Owing to the lack of permanent changes caused by its use our knowledge of its physio-

1. Thompson, R. S.: *Am. J. Syphilis* (April) 1919.

2. Brown and Gaither: *Am. J. Syphilis* (July) 1919.

\* Read at the Sixty-Third Annual Meeting of the Missouri State Medical Association, Jefferson City, April 6-8, 1920.

logic effect is gained more from clinical observation rather than from laboratory tests. Nitrous oxid is a nonirritating inhalation anesthetic entering the blood stream by this route and forming a solution. Two distinct stages are present, analgesia and anesthesia. Analgesia is produced to a very appreciable degree before the onset of anesthesia and much trauma can be done nerve bearing tissues without causing pain. This is well illustrated in labor cases where the pains of first and second stages are lightly felt although the patient remains conscious. In this stage reflexes are not abolished and the muscle retains its normal tone and action. Anesthesia may be divided into several stages. These are passed over in such rapid succession, however, that they are impossible to differentiate. When full anesthesia is reached it corresponds, in the average patient, to the first stratum of the third stage of ether anesthesia as described by Guedell. Sufficient muscular relaxation may be obtained to perform almost any operation. Complete muscular relaxation, as seen in the deep ether narcosis, is difficult to obtain unless the patient has been well prepared with adjuvants, such as morphin and atropin or scopolamin.

Blood pressure during nitrous oxid anesthesia is variable. A high pressure is coincident with highly nervous unprepared patients, or with cyanosis, and since cyanosis is a regrettable and unnecessary accident in the course of a nitrous oxid-oxygen administration we might say nitrous oxid produces little effect on the blood pressure. According to W. B. Spencer<sup>1</sup> there was practically no change in 85 per cent. of a series of cases.

Respiration is slightly increased when sufficient oxygen is given to maintain good color. This may be controlled by the percentage of carbon dioxid.

Pulse rate is slower than under other anesthetics. This, however, as also respiration, may be controlled and regulated to an appreciable degree by the manipulation of the oxygen and carbon dioxid percentage. In a series of my own cases the comparison of pulse rate at the end of anesthesia between similar cases anesthetized with ether showed it to be from 10 to 15 per cent. lower under nitrous oxid.

Histologically, there has been no discoverable change noted in body tissues following its use. In the blood stream it forms a solution with no evidence of permanent change in the phagocytic or oxygen carrying properties of that fluid; at the time of administration, however, there is a temporary disturbance in the oxygen balance of the blood stream. Some contend that its anesthetic properties are due to this fact alone.

This is partially disproven, however, with the use of oxygen and if suboxidation does play a part in the production of anesthesia it is not of sufficient import to be clinically evidenced by cyanosis.

Clinically or experimentally there is no apparent change in any of the organs of assimilation or elimination. In experimental work when nitrous oxid is given over a long period there is no evidence macroscopically or microscopically of degeneration or inflammation as produced by ether and chloroform. When death is produced the necropsy findings are those of asphyxiation. It is fairly definitely concluded that the toxic factor is less than that of the other anesthetic agents. This is clinically evidenced by lack of prolonged vomiting, more speedy return to a normal carbon dioxid relation, comparative absence of toxic gas pains, and a quick elimination through unimpaired excretory organs.

With the foregoing facts in mind it should not be difficult to select from a physiologic and pathologic standpoint those for whom nitrous oxid should be specifically indicated. In this class would fall patients with any irritation of the respiratory tract, save possibly those in whom absorption area has been greatly limited; those on whom we do not wish to superimpose the strain of an increased blood pressure on a weakened cardiovascular system; those in whom there already exists impairment of organs of excretion, and those in whom acidosis is clinically evident. Nitrous oxid is indicated in shock, for here you not only have an already uncompensated acidosis, but a partially paralyzed musculature in which the heart as well as voluntary muscle is involved. As suggested by Bulletin No. 1 of the National Anesthesia Research Society, a deeply anesthetized and relaxed patient is half in shock.

There are other factors which may counterbalance the physiologic indications. Complete exclusion of outside air must be maintained at all times during a prolonged nitrous oxid administration for major operations. Frequently we find that because of the position the patient must assume, or because of the location of the field of operation, close approximation of the mask to the face is impossible. This is true especially of operations of certain parts of the face and neck, also of the nose and throat. Secondly, gas is contraindicated in operations where extreme relaxation is of prime importance, especially in high belly operation when there will be considerable pulling on abdominal viscera. The very young or very old are not good nitrous oxid risks. The former, as pointed out by Cunningham, probably because of increased pulmonary absorptive area in proportion to the body weight, while in the latter the

1. Spencer, W. B.: *Therapeutic Gazette* 43:83.



reverse is possibly true, the total working absorptive area being less. With facilities for accurate and steady introduction of oxygen the risk in these cases is greatly reduced.

In reviewing a series of 591 cases taken from my own record files for the purpose of illustrating the range of application of nitrous oxid-oxygen anesthesia there were 216 under gas. These included: Laparotomy, 75; appendectomies, 30; gallbladder, 3; gastroenterotomies, 1; hysterectomies, 7; prostatectomies, 6; ovarian, uterus operations, 24; cesarean, 4. Others, 141: mastoids, 7; goiter, 3; perineum and cervix, 20; extremities, 10; obstetrical, 76; breast amputation, 4; rib resection, 5; rectal operations, 22; nephrectomies, 4.

Preparation of the patient for anesthesia is a detail that is of utmost importance. The mental attitude plays no small part in the success of obtaining a smooth induction and maintenance of relaxation during anesthesia. Although there may be no outward manifestations of fear, the anesthetist listening to the heart will frequently discover a rate which belies the patient's calm exterior. A previous talk explaining that there will be no sense of suffocation, no retention straps, that they shall not get too much or too little anesthetic, that operation will not be begun until they are asleep, and they will feel no pain. This, coupled with a thorough examination of the heart and lungs, and taking the blood pressure, will do much to gain confidence and insure a successful anesthesia.

Morphin and atropin and scopolamin are invaluable in prolonged cases. In fact, nitrous oxid anesthesia may be called a combination anesthesia as well as a selective anesthesia. The dosage varies and is dependent on the age, weight and condition of the patient. For the average male patient weighing 150 lbs. between the age of 18 and 65, one-fourth of morphin and  $\frac{1}{150}$  of scopolamin or atropin should be given. For the average female weighing 125 lbs.  $\frac{1}{6}$  of morphin with  $\frac{1}{150}$  of scopolamin or atropin. Personally in my own work I find scopolamin much more effective in a majority of cases than atropin. Where there is a marked degree of acidosis present the dosage should be diminished. This medication should be given hypodermically at least three quarters of an hour before operation, after which the room should be darkened and no relatives or sympathetic friends present. The mental faculties are thus quieted, much shock is prevented and the immediate painful effects of the operation are not felt by the patient five minutes after the mask is removed from the face and he regains consciousness. Too much credit cannot be given Crile on his splendid work in this direction.

As before stated, the difficulty in the mechanical control of the gas has been one factor impeding its progress as a general anesthetic. In the past few years this objection has been remedied and there are at present several good machines on the market which answer all requirements and allow its use with accuracy and some degree of personal comfort to the anesthetist. The modern machine should be equipped with facilities for delivering nitrous oxid-oxygen and ether alone, in sequence, or in combinations. Valves for reduction of the pressure from the tanks should be present, allowing the gas to escape at a steady, regular pressure. A second set of valves should control the rate of flow to the bag, this making it possible to estimate a relative percentage of the anesthetic agents being used. In some apparatus this is done by allowing the gas to escape through water, and estimating the percentage by comparison.

Ether attachment is a necessary addition. On most machines there is an emergency valve for quick introduction of oxygen. The tubing from the rebreathing bag to the face-piece should be of sufficient caliber to allow a free and easy passage of gas back and forth, and a valve should be present at the bag or face-piece for the regulation of the pressure in the bag.

Apparatus for heating the gas are of little value except to keep the tanks from freezing over, for by the time a gas reaches the absorptive area, whether heated or not, it varies little with room temperature.

Technic of administration is important. By gentle, slow and careful induction an otherwise obstreperous patient may be bridged over an excitement stage which would cause rise of blood pressure and a noisy induction. Although a patient can be rendered unconscious in a few breaths, it is best to take 5 to 7 minutes before preparation or operation is attempted. Noise should be eliminated in the induction room, for any disturbance such as rattle of pans or instruments or conversation is many times magnified to the patient partially under the influence of an anesthetic. Incision should not be made until corneal reflex is absent.

The mask is first gently placed on the face, all air holes open to allow the patient to become accustomed to its presence, and assure themselves there is no unpleasant odor or choking sensation. The gas bag should be one-fourth inflated with oxygen. As the mask is placed more firmly on the face the air valves are closed and the patient breathes oxygen back and forth into the bag. Nitrous oxid is then gradually introduced and the oxygen cut down

to the desired amount. A definite percentage of oxygen cannot be assigned to all cases; each is a law unto itself. Young and old, anemic, toxic or shocked patients require more oxygen than others.

Color is the one usual oxygen index, cyanosis being a signal for immediate increase. However, cyanosis is not always reliable and occasionally we find patients in whom a gradual onset of paleness, evidence of deep anesthesia—such as fixed staring eyes, shallow respiration—is a very unfavorable symptom and increased supply of oxygen should be given at once. When the patient shows evidence of unconsciousness positive pressure can be exerted in the bag. This should be done with care especially if the bag is made of heavy rubber. Damage may be done by causing a weakened patient to exert undue energy in expiration. Again, if high pressure be used, rupture of pulmonary vesicles is liable to occur. Positive pressure is not always necessary; by its use, however, absorption takes place more quickly and completely, and the anesthesia may be deepened to an appreciable degree.

The ether attachment is frequently a valuable asset in time of trouble, especially in muscular men, unprepared patients, or where there is excessive pulling on abdominal viscera. Its use is advisable to bridge over portions of the operation where relaxation is not sufficient rather than to try by increased pressure or cyanosis to force the patient down with nitrous oxid. A very small amount, 1 to 4 drams, combined with nitrous oxid and given intermittently will suffice to hold an obstreperous patient through a long operation. Usually with this small amount return of consciousness is not delayed and no ill effects experienced. In case of shock the occasional addition of from 10 to 30 drops will do much to whip up a flagging pulse.

The statistics of nitrous oxid mortality are variable and unreliable. Most of them have been obtained from dentist offices and those covering minor operations and inexperienced anesthetists. In literature the estimations will run all the way from 1 to 6,000 to 1 to 25,000, and the assertions made range from the statement that it is the safest of anesthetics to the other extreme, that it is the most dangerous. Both statements are probably true to some extent. The former, when nitrous oxid is in the hands of a well trained, alert anesthetist who realizes its possibilities and its limitations, and the latter when in careless, untrained and unskilled hands. Any procedure should stand or fall by its success in the hands of those competent and trained to use it. Nitrous oxid oxygen anesthesia after eighty years of trial and gradual improvement has taken a definite

place as a selective anesthetic and an indispensable refinement in our effort to place the practice of medicine on a higher and better plane.

1222 Rialto Building.

### THE CELLULOID FOOT FORM BRACE

ROBERT MCE. SCHAUFFLER, M.D.  
KANSAS CITY, MO.

It is a common experience to have trouble in holding a deformed or relaxed foot in a brace after it has been corrected by manipulation or operation and held for a time in plaster. If the foot is strapped to a sole plate it tends to twist away, or the heel to pull up. If we depend on a shoe to which the brace is attached, the position may appear good at first but later the heel slips up or the foot deforms the shoe laterally. Yet such a foot may be easily held in the proper position by the hand of the surgeon. In the summer of 1917 I requested my brace maker, Mr. P. W. Hanicke, to reproduce my hand hold in celluloid. A celluloid boot was made over a plaster model of the foot and then cut away to leave the grip desired. To this the metal and leather of the brace were attached. The results were so satisfactory that the procedure was standardized and is now used constantly, the prescription reading: "celluloid foot form," followed by a description of the brace desired. In most cases the foot form retained includes a heel cup, side counters and toe flanges and the entire sole. In other cases the sole is cut back at the level of the ball of the great toe. Other variations naturally suggest themselves. The celluloid foot form is left just wide enough at the top so that by slightly springing the upper edges the foot slips into the shell. It is deepened by a rawhide upper, laced like a shoe. It is very important that there should be a backward projection for the heel in the celluloid and that the rawhide should fit in close over the Achilles tendon and be well shaped over the ankle.

We have used the celluloid foot forms in a great variety of conditions at all ages and found them most satisfactory. Whenever the foot has been properly corrected we have been able to hold it. The objections are: an increase in expense, mostly for labor, and the difficulty of a foot covering. Some sort of sandal, moccasin or overshoe is required, or an ordinary shoe considerably oversize. Some small strips of leather under the bottom of the foot form help square up the heel or equalize the metal stirrup band. In young children just standing or learning to walk a thin leather sole is sufficient and no shoe is worn over the brace.

416 Argyle Building.



# STERILIZING THE SEMINAL VESICLES WITH MERCUROCHROME 220

NELSE F. OCKERBLAD, M.D.  
KANSAS CITY, MO.

Apropos of mercurochrome 220 (dibrom-oxy-mercury-fluorescine) for use in the attempt to sterilize the seminal vesicles in cases of chronic vesiculitis due to gonorrhea. Since the announcement by Young, White and Swartz,<sup>1</sup> of this new antiseptic for use in the genito-urinary tract it has been widely used in the various infections from gonorrhea to pyelitis. Taking the suggestion from Dr. Elmer D. Twyman, who had injected this substance into the vas of a patient with an epididymitis with good result, I began to use this dye compound in the place of the usual argyrol. At first I proceeded rather cautiously, having in mind some of the cystitis patients who complained bitterly of the pain caused by the instillation of a 1 per cent. solution of mercurochrome 220 into the bladder. We had already tried the now discarded acriflavine for vesicular injection through the vas but found it entirely too irritating. We used the modification of Belfield's<sup>2</sup> method described by Thomas.<sup>3</sup> I have now injected the seminal vesicles of twenty-five patients suffering from chronic vesiculitis of gonorrheal origin. Not one has complained of the slightest pain either during the injection or afterwards due to the presence of the drug in the vesicles. Solutions up to 2 per cent. were used. The dye has been observed tinging the urine six weeks after its injection. At first one has a little difficulty in the use of this red substance, for because it is so nearly the color of blood, a drop of it spilled on the vas or the surrounding tissues obscures the field and of course cannot be sponged off.

The few epididymitis cases that we have injected by directing the needle downward toward the epididymis have done exceedingly well and we are encouraged to do more of them. From our experience thus far it is a safe substance for use in the seminal vesicles and the results are far superior to those obtained by any other substance that we have yet tried.

It is hoped that this brief report will stimulate others to apply mercurochrome in this manner so that we may soon have a sufficiently large number of cases from which to make a complete study.

415 Argyle Building.

1. Young, H. H., White, E. C., and Swartz, O. E.: A New Germicide for the Genito-Urinary Tract—"Mercurochrome 220," *J. A. M. A.*, 73:1483 (Nov. 15) 1919.

2. Belfield, W. M. T.: *J. A. M. A.* (April 22) 1905; *J. A. M. A.* (Dec. 25) 1907; *Tr. Urol. A.*, 1909.

3. Thomas, B. A.: Technique and Observations on the Operation of Vas Puncture and Medication for Seminal Vesiculitis, *Surg. Gynec. & Obst.* 24: No. 1, 1917.

# REPORT OF THE COMMITTEE ON MEDICAL EDUCATION OF THE MISSOURI STATE MEDICAL ASSOCIATION, 1920

An address, yes, an appeal to the public emanating from the Missouri State Medical Association commending the new health law of the state. We call special attention to that part of the law which provides for deputy state commissioners of health for counties and cities. This law brings you in direct contact with a health commissioner of your own choosing to serve you in all things pertaining to public health 365 days in a year. The basic principle on which his duty rests is that the highest prerogative of good government is the preservation of human life and the mitigation of human suffering. The most priceless possession of man is health—even from an economic viewpoint. A sick man has to be cared for and does not produce.

This law will enable the deputy commissioners to go direct to our common school system, showing the young mind so much of bacteriology as can be understood and utilized that he may know what real cleanliness really means. Bacteriology has made the medical profession of today master of many contagions; has enabled the surgeon to invade any cavity of the human body with safety. Bacteriology has enabled the sanitary engineer to make plans for saving lives; the farmer to save his growing crops, to increase production by enriching soils—feeding the world. Why not take it to our common schools and teach children at the impressionable age? Show them that all contagious and infectious diseases are caused by microorganisms. The germs being something that the child does not see with his naked eye, he cannot feel them with his fingers, he cannot hear them with his ears, but he knows they exist by their effect on organic matter; he knows it to his own sorrow too late. Why should he not be told of their breeding places; their manner of life; how they enter the human body; what they do when once inside; how they destroy his cells.

Yes, man is a cellular body in which is implanted a living soul. God breathed into his nostrils the breath of life and man became a living soul. Is that body worth his brother's care? The whole matter resolves itself into a question of education, cooperation with the county superintendent of schools, given in a form to be understood and utilized.

The Missouri State Medical Association has over 3,000 members, every county in the state being represented. It stands as the best exponent of medical thought. The state board of health is the legal exponent. The deputy state health commissioner makes the county the unit of distribution. Uphold his hands. Efficiency will result. He is worthy of your confidence and respect. Human life saved; human suffering saved; economy conserved. What higher motive could man have?

Why then this address to the public? First, to uphold the hands of these legal exponents on all matters pertaining to health as worthy of your confidence and respect. Second, the reports from the recent draft boards of our government, selecting men in the early prime of life where only men sound in body and mind could bear the strain of war, show a lamentable condition found in every state in the Union—thirty-three out of every 100 men found unsound. There must be some reason why such a condition exists. Searching for the real causes must rest on the efficiency of the deputy commissioner. This cannot be efficient and remedied without the cooperation of the public.

A. W. McALESTER, M.D., Chairman.

GEORGE C. MOSHER, M.D.

C. H. NELSON, M.D.

The Committee.

# THE JOURNAL

OF THE

## Missouri State Medical Association

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OCTOBER, 1920

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### EDITORIALS

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#### MODERN JUGGERNAUTS AND THEIR MEDICAL VICTIMS

We note with sorrow not untinged with a sense of mortification the recent loss of several physician's lives offered up as a sacrifice to inadequate and miserably enforced laws coupled with criminal carelessness and an utter disregard of human life which is, in the physician's case, becoming more endangered, as the passing of each day finds traffic conditions in sorrier straits. In one instance a St. Louis physician was wilfully murdered by a speed maniac who had set out with the avowed intention of breaking speed limits, this being his usual custom. This pervert had been successful in eluding the police, who were "looking for him" for previous offenses of like character. In another casualty a physician and his child lost their lives near St. Joseph through the criminal negligence of an official who failed to post a warning about a caved-in embankment. The traditional grade-crossing still claims its regular toll of physicians' lives.

If we accept the *a priori* postulate that life and death like marriage are ordained in heaven, then of course we need go no further with our premise but simply deduce that we have come to a stage in modernity's cycle where human life has become extremely cheapened, and that a life more or less, professional or lay, makes little difference. But we surmise that the universe was adjusted to a law of perfection based on the subsidiary laws of conservation in the material world and compensation in the metaphysical realm; and that the Hidden Player in observing His human pawns does so in strict adherence to the laws ordained by Him for the universe in its entirety and not in accordance with the destinies of those individual aggregations of matter which we term mortals. If this corollary did not hold, then we dread to cogitate on what would eventuate to these murderers—there is no more fitting term—when there came to the Supreme Bench the shriek of anguish from the bereft widows and orphans

appealing for justice. If this deduction were untenable there could result logically but one outcome—the meting out of a swift and terrible retribution.

In the recent unpleasantness Germany's Junkers valued the life of a physician as being equivalent to that of several hundred soldiers; but manifestly it would ill befit us to isolate the medical man from his co-professionals, such as lawyers, pedagogues, engineers, or in fact any of the vast array of cultured minds, in attempting to accord a relative value of their existence to their communities. Whenever a professional man is killed in an auto mishap it serves to project in a glaring manner the irony and cynicism of the modern paradox that places such meager valuation on human existence, not only in its entirety but on any one being who has purchased his knowledge at great cost and deliberate self-sacrifice. The grimness becomes more intense when we consider that the miserable miscreants in the guise of normal individuals who perpetrate these outrages against all the laws of saneness are the very ones whom society can spare the most: warped mentalities to whom life presents a favorable stage setting for the drone and the parasite. Obviously, no normally constituted individual will drive a machine in a manner which can possibly endanger his own or someone else's life.

Recently a jurist stated that the auto was the guilty agent in most of the modern crimes, since it has made many crimes possible which were hitherto not easily performed. We believe that the good judge missed the point and offered an *a posteriori* deduction. Germany, for instance, perpetrated many outrages with her submarines; shall we therefore hold the undersea craft culpable? Rather let us surmise that for some reason not clearly evident our laws have failed to keep pace with the development of the high speed motor. Is it, perhaps, because the fascination of motoring has so enamored modernity that the novelty has failed to wear off? If so, then it is high time indeed that we turn to the debit page on our ledger of modernity and note the grewsome entries recorded in the blood of individuals, lay and professional, while in the pursuit of their regular vocations. Have we become so obtunded to that which constitutes sanity and safety that we sit by complacently while the grim reaper files notches in his scythe?

To those whose vision has not become clouded by the rapid evolution of motor vehicles the fol-



lowing facts protrude lucently: Motor accidents are increasing to an alarming extent and exacting a menacing toll of life. With our narrow city streets and bulging array of machines the traffic is becoming congested far past the limit of safety. For pedestrians there is becoming evident the law of the quick and the dead. The remonstrances of the press clamoring for traffic legislation is as effective as a babe's cry in a cyclone, for the lawmakers do not seem even mildly interested. The average fine for speeding, which is usually deleted through the efforts of some influential friend, has proven merely an incentive for repetition of the offense, and the insurance companies by their promiscuous awarding of policies have probably motivated the greatest number of motor accidents, all resulting in sheer indifference to any sense of responsibility on the driver's part.

The culpable agent is not far to seek. The censure of the daily press usually resolves itself around the guilty chauffeur; but casting innuendos at this individual from now until eternity will not alter the fact that he is with us and looms menacingly on our economic horizon. The modern driver of the careless type is manifestly "sick" and our lawmakers are evincing no sign of attempting a cure. Let us therefore utilize the modern panacea—prevention. This should be easily accomplished—must be, in fact. The ounce of prevention easily resolves itself into a systematic examination of the special senses of those applying for a chauffeur's license, particularly the hearing and seeing apparatus and mental tests. The present method of handing out these licenses for the mere asking is the most irrelevant procedure possible under the circumstances. Why should there be different laws for the man who handles the throttle of a locomotive, which has at least the virtue of being confined to a track, and practically no restraint whatever for the irresponsible speed maniac who has the freedom of the road and may in the long run destroy more people proportionately than the engineer? In times such as those under which we exist, when the nervous system is continually hovering near the point of severance of stability, there should, by all logical ratio, be instituted a rigid system of testing the requisite abilities of those seeking permission to drive a motor vehicle on the highways and byways of our communities. There are far too many youthful faces at the steering wheels of motor vehicles. In such adolescents there cannot possibly have developed a full sense of the serious responsibility incurred by

the driver. Let us hope that the advent of prohibition will eliminate the demon rum from the list of agents in motor casualties.

No person should be permitted to drive an automobile of whatever style whose capability in that direction has not been attested to by a competent physician and other persons deemed necessary to pass on such qualifications. The plan is not only practical and easy of accomplishment but would meet with the cooperation and approval of all sane-minded individuals. Conditions demand the procedure. Something has got to be done and accomplished soon. If we maintain our present insouciant attitude on this question we are manifestly stultifying ourselves in the eyes of each other as representing the highest product of Deity and placing a blotch on the mandate, "Thou shalt not kill."

#### A SURVEY OF THE FEEBLEMINDED

The National Committee for Mental Hygiene, invited to the state by Gov. Frederick D. Gardner, has undertaken a survey of the conditions of the feeble-minded—the expense of their neglect and what economies can be effected by the training and custody of such persons. A survey of the insane population of the state was completed by the National Committee last spring and the report will be published soon. The survey of the feeble-minded is under the direction of Dr. Thomas H. Haines of Columbus, Ohio, who has made similar surveys for the committee in Kentucky, Tennessee, Alabama, Mississippi and Louisiana. Mr. C. L. Hultgren is assisting in this survey.

In order to assist the National Committee in the most economical procedure both in ascertaining the conditions of care and of neglect of the feeble-minded in our state and in planning for the economies to result from their better care, Governor Gardner has appointed the following to act as an advisory commission to the survey:

Sam A. Baker, Superintendent of Public Instruction,  
Dr. Malcolm A. Bliss, President, Missouri Society  
for Mental Hygiene.

Rhodes E. Cave, Chairman Children's Code Commission.

Charles A. Ellwood, Professor of Sociology, State University, Columbia.

Dr. E. J. Goodwin, Secretary and Editor, Missouri State Medical Association.

Dr. George H. Jones, Secretary, Missouri State Board of Health.

George Melcher, Director, Bureau of Research and Efficiency, Board of Education, Kansas City.

W. R. Painter, Chairman of the State Prison Board.

Miss Clara Harrison Town, Educational Psychologist, Kansas City.

J. L. Wagner, Secretary, State Board of Charities and Corrections.

J. E. W. Wallin, Director, Psycho-Educational Clinic, St. Louis.

Dr. R. P. C. Wilson, Superintendent, Colony for Feeble-minded.

A majority of this commission met at the capitol September 15, and organized by electing Dr. Jones chairman and Mr. Wagner secretary. Plans for an active propaganda in the line of securing enlarged facilities for the care and the training of the mental defectives of the state were laid. A committee composed of A. F. Kuhlman, of the State University; J. Kelly Poole, of the Prison Board, and Dr. E. J. Goodwin is specifically charged with the work of publicity and education. This committee will actively interest itself in the work of enlisting the cooperation of organizations and of individual citizens generally in solution of the problems arising from the grown-up children among us; who have the bodies of men and women but the minds of children, whom we allow to go about as if they were real grown-ups, and who consequently clog and hinder the work of our schools, fill our children's homes, complicate the work of our reformatories, prisons, and courts, and at the same time are bringing forth abundantly of their same kind to multiply these problems in the near future.

Plans were matured for study of some of our most notably fruitful lines of unproductive stock. The survey will extend from correctional institutions of the state and cities, where it is now in progress, to children's homes and almshouses and to some sampling of rural school populations.

Every physician in Missouri can make a useful contribution to the effectiveness of this survey, and that with only the time it will take to write a postal card, by sending to Dr. Thomas H. Haines, 334 The Capitol, Jefferson City, the names of some persons belonging to such degenerate stocks and how to find them. Such information will be regarded as given in confidence. Write to Dr. Haines about the Kalikaks and Jukes you know in Missouri.

A full account of the meeting of the commission will be found on another page.\*

### THE DOCTOR AND MUD

Apart from the general interest he takes in those things which mean community progress, the Missouri doctor has a specific and vital

reason for getting behind the \$60,000,000 good road bond issue to be voted on in November. The passage of Constitutional Amendment No. 6 at the November election, means the immediate construction in the state of 6,000 miles of hard surfaced highways and the elimination of that many miles of disheartening mud.

No one knows better than the physician, especially the country physician with a wide radius of practice, what a bitter foe mud is to him. It is easy to imagine his feelings as he races with winged Death over miles of bogs and sink holes with the sickening knowledge that hours must elapse before he can reach the stricken home, hours that often mean the difference between life and the passage beyond. It is safe to state that scores have died in Missouri who might have recovered had the summoned physician hastened to the bedside over a broad, solid highway instead of being compelled to crawl through mud wallows.

When the roads are bad, impassably bad, the farmer may stay at home, the merchant may remain in his store, the housewife may keep to her kitchen. To them there are temporary escapes from mud; but not so with the physician. Sickness and death are no respecters of seasons; the stork flies in all manner of weather. The summons comes and the doctor must go regardless of every obstacle and inconvenience.

It is an ironic fact that when the weather is good and the roads firm the doctor's practice is at its lowest. With the rain and snow and thaws illness comes apace. The mud and slush that contribute to make men sick also contribute to keep the doctor from hurrying to their assistance.

Firm highways mean rapid transit for the doctor—especially for the already overworked country doctor—and that in itself is a consummation devoutly to be wished for. Good roads will give him a fairer chance in the battle with death; they will lighten the tedium of his labors, increase the number of hours for study without decreasing his hours of rest and recreation; and they will lengthen his years of service.

The proposed \$60,000,000 bond issue provides no additional taxation on an already overburdened population. The interest and the sinking fund charges are to be met from the funds that now accrue to the state from the collection of automobile license fees, aggregating more than \$2,000,000 and certain to increase as the motor driven vehicle comes into more general use.

The purpose of the Good Roads Federation, which is conducting a campaign of education in

\* See page 432.



behalf of Amendment No. 6, is to have a large sum of money available quickly so that the work on 6,000 miles of hard roads can be begun at once. Hitherto, highway work has proceeded in Missouri without any definite plan or program, the counties proceeding with improvements without regard to the general needs of their neighboring counties or the state at large. Much money has been wasted and much energy dissipated.

It is the plan of the Road Federation to have the legislature, after the passage of the amendment, provide for a comprehensive highway scheme that will take in every one of the 114 counties of the state and build a coherent net of hard roads that will, in the course of time, "Lift Missouri Out of the Mud."

What mud has done to Missouri can be gauged from the reports of the Census Bureau and the Department of Education at Washington. The state is thirty-fourth in education—in other words, there are only eleven states in the Union that have more native born illiterates than Missouri—and more than three-quarters of the counties in the state have lost population in the past decade. Of course there are other reasons besides mud for this distressing situation, but it is an indisputable fact that those states which have good roads have suffered little or not at all from "the farm to the city" movement. Mud roads mean inaccessibility to schools, which in turn means illiteracy and ignorance—and every doctor in Missouri knows what a terrible enemy he has in ignorance.

Our president, Dr. W. J. Ferguson of Sedalia, is chairman of the physician's organization branch of the Missouri Good Roads Federation and is doing yeoman service in connection with this great improvement.

If there is anything members do not understand in connection with the amendment they should communicate with Dr. Ferguson. He will be very glad to clear up any obscure points.

**"LIFT MISSOURI OUT OF THE MUD."**

*Vote for Amendment No. 6.*

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### TEAM WORK

The St. Louis Tuberculosis Society representing the citizens of St. Louis, and the Hospital Department representing the city authorities, have been cooperating for the past few months to bring St. Louis to the front in tuberculosis work.

The recent convention of the National Tuberculosis Association, which brought to St. Louis

the most learned authorities, both lay and professional, interested in all phases of this disease, served to bring new life into the campaign against the greatest scourge of man, the White Plague.

Affairs at Koch Hospital, St. Louis, are rapidly assuming a greater state of efficiency. The Board of Aldermen have voted over \$50,000 for the improvement of this institution and the Hospital Commissioner, after a conference with the St. Louis Tuberculosis Society, introduced a bill in the Board of Aldermen creating a tuberculosis controller for St. Louis which was passed by a large majority. The duty of the tuberculosis controller is to correlate all the municipal tuberculosis matters so that the greatest efficiency in this direction can be had. A well planned program has been brought forward which no doubt will serve the community well.

A medical advisory committee consisting of the heads of all the tuberculosis agencies in and around St. Louis has been added to the tuberculosis society's activities. The tuberculosis society has made great efforts in bringing the Night and Day Camp to the attention of all industrial plants. The response from the industrial plants has been very gratifying, showing that the spirit of the times for the cooperation of the laymen with the medical men in stamping out tuberculosis in St. Louis is growing. Added to this is the fact that the citizens of St. Louis have voted a bond issue of sufficient funds to establish a municipal farm where tuberculosis patients will be taken care of.

One of the greatest drawbacks to all this aggressive campaign is the lack of funds, both private and municipal. In order to remedy this it is contemplated to bring up in the legislature at its next session a bill authorizing the city of St. Louis to create a mill tax, such as the tax for the zoo and the school tax, whereby sufficient funds can be had to attain the ideals of the work in this line. It is high time that the city realizes that good can only arise from concentrated team work.

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### SILVER JUBILEE OF THE AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY

The silver jubilee meeting of the American Academy of Ophthalmology and Otolaryngology will take place in Kansas City, October 14-16. This meeting should have a peculiar interest for Missourians for the reason that this society

was organized in Kansas City in January, 1896. The father of the organization is Dr. Hal Foster of Kansas City, and the organization meeting took place at the Midland Hotel, April 9, 1896. While there were in attendance only thirty men, many who could not come wrote enthusiastic letters endorsing the movement. The organization was first called the Western Society of Eye, Ear, Nose and Throat Surgeons. The temporary organization was called to order by Dr. J. H. Thompson of Kansas City, and Dr. Hal Foster, secretary. Our late lamented colleague, Dr. Adolf Alt of St. Louis, was elected chairman and Dr. Hal Foster, secretary, of the permanent organization. Dr. Carl Barck of St. Louis had the honor of reading the first paper under the title "Two Cases of Opening of the Lateral Sinus for the Removal of Infectious Thrombosis." At its first meeting the society's name was changed to the Western Ophthalmological, Otolological, Laryngological and Rhinological Association. One of the ex-presidents of the society has said: "The weight of the name was enough to sink the society into oblivion." The first permanent officers elected included Adolf Alt of St. Louis, president; B. E. Fryer of Kansas City, vice president; Hal Foster of Kansas City, secretary. One of the first amendments to the constitution and by-laws required that all candidates for membership must be eligible for membership in the American Medical Association. The society has held annual meetings and the membership has increased. Among Missourians who have held office in this organization are: B. E. Fryer, Frank Rumbold, M. A. Goldstein, Fayette C. Ewing, H. W. Loeb, John Green, Jr., Carl Barck.

It has been the practice of the Academy to invite distinguished ophthalmologists and otolaryngologists as guests at its annual meetings. Among those invited have been Dr. Herman Knapp of New York, Dr. Marcus Gunn of London, Dr. George T. Stevens of New York, Dr. Dundas Grant of Liverpool, Dr. J. B. Lauford of London, Dr. Santos Fernandez of Havana, Dr. Sidney Stephenson of London, Dr. Albert Gray of Glasgow, Dr. Anton Elschnig of Prague, and last, but not least, Lieut.-Col. Robert H. Elliot, the author of the well known trephine operation for glaucoma.

Early in the history of the society it was determined not to confine the membership to the West or Middle West and for this reason the name was changed in 1903 to the American Academy of Ophthalmology and Otolaryngology. The society has been foremost in pro-

moting advances in ophthalmic and otologic education, having been the prime mover in the formation of the American Board of Ophthalmic Examiners, and at its last meeting took steps to create a similar board in rhinology and otology.

## ANOTHER FALLACY OVERTHROWN

At the request of the Council on Pharmacy and Chemistry, John F. Norton, of the Department of Bacteriology of the University of Chicago, has made an investigation of the disinfecting value of the so-called "antiseptic" and "germicidal" soaps.<sup>1</sup>

As a result of an extended research Dr. Norton comes to the conclusion that, while sterile hands may not be obtained by the use of the much lauded "antiseptic" and "germicidal" soaps, a considerable portion of the bacteria that are found on the hands may be removed by their use. However, he comes to the conclusion that an ordinary toilet soap or the green soap of the pharmacopeia is more efficient in germ-removing properties than these "antiseptic" and "germicidal" soaps, for the reason that the addition of the antiseptics or germicides is likely to interfere with the lathering qualities of the soap. In other words, it is the soap and not the antiseptic or germicide which accomplishes the removal of bacteria from the external surfaces of the human body.

While the great value of substances that kill germs and of substances that prevent the growth of germs is appreciated more and more, it is also being recognized more generally that under many conditions they cannot be used successfully on or in the human body. Antiseptic washes, gargles and lotions had their day with an ever credulous medical profession until there came the appreciation that the water used in connection with these agents deserved the credit for any observed beneficial effect. As a result, *Liquor Antisepticus* of the U. S. Pharmacopeia was "demoted" to the National Formulary and, as the latter work is now in process of revision, it may expect to be "dishonorably discharged."

In the same way, most physicians have come to the conclusion that intestinal antiseptics are of no avail. Though scientific proof of the inefficiency of intestinal antiseptics is still lacking, there is a growing conviction on the part of physicians that any beneficial effect that has been observed from the use of intestinal antiseptics is due to the cathartic that had wisely been combined with the antiseptic.

1. *Jour. A. M. A.*, July 31, 1920.



As the ineffectiveness of attempts to hinder or stop the growth of undesirable bacteria becomes more apparent, the question becomes increasingly insistent: how much harm is done by the use of ineffective antiseptics and germicides? 1. There is the false sense of security that comes from the use of a "germicidal" soap that fails to get rid of germs that might have been removed by a more thorough use of an ordinary cleansing soap. 2. There is the exposure to infection which may come through the removal of protecting mucus by the persistent use of mouth washes and gargles. An illustration of the second kind was recently furnished by R. H. Major,<sup>2</sup> in a study of the relation of *Bacillus influenzae* in pneumonia. Major's researches indicate that the invasive powers of the bacillus are limited but that a preliminary irritation of the respiratory tract with chlorin gas permitted an extensive invasion with influenza bacilli injected intravenously or intratracheally. Major's experiment suggests the thought that inefficient medicines may do harm more often than is realized.

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#### AN ALL-AMERICAN HEALTH CONFERENCE

The first of a series of regional health conferences authorized by the International Health Conference in Cannes is to be held in Washington, D. C., December 6-13. It will be devoted to a consideration of venereal diseases which, according to conservative estimates, constitute one of the world's most terrible plagues.

The conference is being organized under the joint auspices of the U. S. Interdepartmental Social Hygiene Board, the U. S. Public Health Service, the American Red Cross and the American Social Hygiene Association. Prof. William H. Welch of Johns Hopkins has consented to serve as president, and already assurances have been received that some of the foremost physicians and sociologists will participate. Prominent health officers and sociologists from all parts of North and South America will attend.

The conference will review past experiences and existing knowledge as to the causes, treatment and prevention of venereal diseases, and will formulate recommendations relating to a practicable three-year program for each of the North and South American countries participating. In addition it will make suggestions for putting such programs into effect.

In speaking of the proposed conference, Sur-

geon-General Hugh S. Cumming, of the U. S. Public Health Service, said: "The United States is in the front rank of the countries which have organized against the Great Red Plague, and a consideration of the various measures which have proved of value in different communities will undoubtedly contribute much to further progress in the countries represented at the conference. More than any other important communicable disease, the spread of the Great Red Plague is inextricably bound up in a mass of social, economic, educational and recreational problems. The success thus far attending the campaign against the venereal diseases is due largely to the fact that this interrelation has been recognized and that the campaign has enlisted the cooperation not only of physicians and sanitarians, but of sociologists, judges, probation officers, educators, the clergy and good citizens generally."

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#### ANOTHER SANATORIUM FOR TUBERCULOUS SOLDIERS

According to an announcement made by Surgeon-General Hugh S. Cumming, the magnificent tuberculosis sanatorium heretofore operated by the Army authorities at Fort Bayard, N. M., has been transferred to the U. S. Public Health Service and will soon be available for treating discharged, disabled soldiers. Splendidly located, not far from Silver City, and conveniently accessible on the Santa Fe Railroad, this sanatorium has long been the pride of the Army. The climate is almost ideal in that it permits outdoor life for a large part of the year.

The Fort Bayard Sanatorium will provide the Public Health Service with 1,000 additional beds to care for tuberculous patients. The present sanatorium at Deming will be held in reserve specially for winter use.

At the Fort Bayard Sanatorium the Public Health Service will treat only ambulatory cases of tuberculosis in which the prognosis is favorable. Patients will be admitted only after careful observation elsewhere to make sure that their condition is suitable for successful treatment at the high altitude of this sanatorium. In general, it is the policy of the Public Health Service not to move patients far from their homes, for experience has shown that such removal often has an unfavorable effect. For this reason patients for the new sanatorium will probably be drawn principally from the middle and southwest sections of the country.

2. Jour. Med. Research 41: 373 (March) 1920.

## BOOKS FOR LEISURE MOMENTS

*Reading with discrimination broadens the mind  
and strengthens the mental grasp*

EVER since Somerset Maugham wrote his striking novel, "The Moon and Sixpence," a new note has been introduced in the literature of the day. This new note may be summed up as follows: A man of talent is hampered, as regards a full expression of his talent, if his environment—wife, mother or near relatives—is of the humdrum sort that discourages by its stuffy atmosphere the efflorescence of talent or by misdirected enthusiasm drives the man of talent into channels which are really not his channels because had he been allowed to follow his natural bent he would have selected those for which Nature had gifted him. This is the fashion in literature today—let us say a fad, a fancy—and literature will not stand alone for long as the exponent of this tendency, but will have imitators among the disappointed, the disgruntled in other walks of life—in medicine, in science, in law, and even in the business world among those luminaries who today excite our envy on account of their material success. A book that is illustrative of the foregoing in no mild degree is the recently published "Ordeal of Mark Twain," by Van Wyck Brooks (E. P. Dutton & Co., New York). Mr. Brooks is a staunch supporter of the fashion in literature today; he is a doughty fighter for the complete emancipation of talent and a doughty fighter against humdrum influences and misdirected enthusiasms which emanate from those who desire to guide yet are not equipped to do so along lines that would be of benefit to talent or genius. Mark Twain, be it said here, was probably the most over-rated writer this country has ever produced, and to blame his mother, his wife, and William Dean Howells because he continued to write humorous stories and sketches, and because on account of their interference he never developed into a serious writer of the first magnitude, is carrying matters into so rarefied an atmosphere that the reader of intelligence is completely bewildered by the attenuated arguments. The only serious work of Mark Twain's published during his life was "Joan of Arc," which appeared in *Harper's Magazine* anonymously, and while at the time it attracted attention because of its anonymity, no critic would have the temerity today to compare it favorably with Anatole France's book on the same subject. Even Mr. Brooks does not praise it at all; but despite his poor opinion he yet argues that because Mark Twain preferred

it to all his other works indicates that Mark Twain would have developed into a famous writer of serious books if his mother, his wife and others had not made him turn again and again to the writing of humorous works. Our opinion is that Mark Twain got his deserts here on earth as very few writers are fortunate in getting: the least thing he wrote was praised, if not overpraised. He was not only a popular writer but a public character who kept himself in the limelight much more than his talent deserved of excessive illumination. Surely no other writer of his epoch was so great an idol with the general public and surely no other writer reaped so rich a harvest in the matter of dollars. That "The Mysterious Stranger," published after Mark Twain's death, is surcharged with pessimism, as pointed out by Mr. Brooks, is not indicative that Mark Twain was a deeply disappointed man because he had been hampered by advice, but merely goes to show that even a humorist, no matter how successful, is a human being after all, with moments of extreme depression, especially when nearing the gate where life's toll must always be paid.

An interesting book is "The Ordeal of Mark Twain" and well worth reading, but it is not a convincing book albeit the fashion of the day in literature is followed. No admirer or detractor of Mark Twain should overlook this publication, for its earnestness, its comprehensiveness, its argumentativeness within the narrow path Mr. Brooks has selected, are not to be decried because these salient features show more industry than convincingness in advancing the cogent reasons why Mark Twain did not develop into a serious writer of the first rank.

P. S.

## NEWS NOTES

DR. L. J. MATLOCK of Caruth, Mo., President of Dunklin County Medical Society, was married to Miss Callie Schram of Benton, Ill., August 27.

THE mother of Dr. T. Guy Hetherlin of Louisiana died recently at Dr. Hetherlin's home. She was 81 years old. Her husband, two sons and four grandchildren survive her. One of her granddaughters is a nurse in St. Luke's Hospital, St. Louis.

THE Hollister-Wilson Laboratories of Chicago, a subsidiary of Wilson and Company, announce a change in their corporate name to The Wilson Laboratories in order that the con-



nection of these laboratories with Wilson and Company may be definitely established and thoroughly understood by the medical profession. Their announcement appears in this issue on page xix.

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DR. E. H. TROWBRIDGE of Kansas City, whose training school for unusual children has made marked progress in training mentally retarded children, has recently purchased the beautiful home and spacious grounds owned by Mr. W. A. Pickering at 2827 Forest Avenue, Kansas City. The building has been made especially adapted to school uses for the kind of children accepted by Dr. Trowbridge for training and development.

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WE are glad to announce that the Takamine Laboratory, Manufacturing Chemists of New York City, have been allotted space in our advertising department and we invite the attention of our members to their first announcement in this issue. Operating under government license and approved by the Council on Pharmacy and Chemistry, the arsphenamin preparations manufactured by this firm should have a friendly reception.

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THE Twelfth Councilor District will have its second postgraduate meeting at Excelsior Springs on October 20, beginning at 2 o'clock. The members in the district will be notified of the scope of the program when it is completed. The following members at Excelsior Springs constitute the committee on program: J. E. Musgrave, J. J. Gaines, E. L. Parker, J. E. Baird, H. J. Clark. They are assisted by Dr. Spence Redman, Platte City, Councilor of the Twelfth District, and Dr. Franklin E. Murphy, Kansas City, Councilor of the Thirteenth District.

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THE St. Louis Tuberculosis Society has created a Medical Advisory Committee for the purpose of bringing the influence of medical practitioners and medical institutions to the assistance of the society in the control of tuberculosis. The following have been appointed: Major L. P. H. Bahrenburg, United States Public Health Service; Dr. Louis Boisliniere and Dr. Schlenker, Mount St. Rose Hospital; Dr. Seelig Simon, Jewish Home for Chronic Invalids; Dr. M. D. Dwyer, Koch Hospital; Dr. E. L. Opie, Washington University; Dr. O. H. Lamb, St. Louis University; Dr. James Stewart, Board of Education; Dr. J. J. Singer and Dr. A. M. Frank, Washington University Clinic; Dr. A. E. Henske, St. Mary's Hospital; Dr. S. T. Lipsitz, Dr. A. Bedal.

Amendment No. 8 on the ballot at the forthcoming election provides for a system of taxation to enable the state to assist the blind. The legislature has twice passed the bills appropriating funds to help the blind but in each instance the bills were vetoed because of insufficient funds in the state treasury to meet the cost of giving the blind this very worthy help. The blind workers have therefore adopted the method of asking the people to establish a small tax by which a fund will always be available. No one will question the duty of the state toward giving the blind an opportunity of helping themselves which this amendment does, and no doubt all our members will support Amendment No. 8. St. Louis Medical Society at the opening meeting of its winter session, September 21, approved the amendment. Vote for Amendment No. 8.

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PLANS for the postgraduate meeting at St. Louis in November are taking shape although it is too early to announce the program. The councilor of the district, Dr. A. H. Hamel, and Dr. C. E. Burford, president, and Dr. Arthur Gundlach, secretary, of the St. Louis Medical Society, after a conference have proposed that the meeting extend through a period of three days and include some prominent physicians from outside of the state. There is a great opportunity here to develop an exceedingly interesting and instructive series of clinics in St. Louis and the officers in charge of the movement will exert themselves to the utmost to give our members the full benefit of the clinical facilities at St. Louis on this occasion. Every member of the Association and visiting physicians from nearby towns in Illinois will be invited to attend the meeting. Sponsored by the State Association and being entirely controlled by the St. Louis Medical Society the movement should stimulate a very large attendance.

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MEMBERS will observe that The Takamine Laboratory of New York presents the initial announcement of its facilities to serve physicians when in need of the products of a licensed and approved institution. While other laboratories advertising in our JOURNAL present products similar to those offered by The Takamine Laboratory we take it that members are glad to know the facilities of every good institution erected to manufacture articles for use in active practice. Here again we wish to emphasize that only approved and reliable institutions are permitted to buy space in our JOURNAL. Under

this class comes another new advertiser whose first announcement appears in this issue—the Indiana Radium Institute of Indianapolis. Radium has passed the experimental stage and in cautious hands intelligently applied it is rapidly establishing itself as a dependable therapeutic measure. So we are glad to include the announcement of the Indianapolis firm along with other radium laboratories that have been with us for several months. While on this subject we wish to thank our members for the interest they are manifesting in *THE JOURNAL*. Knowledge of this interest comes from various sources and particularly—from the cold materialistic viewpoint—it is gratifying and encouraging to know that the advertisers show confidence in and respect for our *JOURNAL*.

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DOUBTLESS all physicians in the state are interested in the movement to frame a new constitution for Missouri and will vote for the proposition at the coming election. The proposed amendment is Amendment No. 15, which constitutes the first step toward the adoption of the new constitution. This is a nonpartisan movement and has been indorsed by all political parties, for it is generally acknowledged that our constitution is woefully inadequate to meet the requirements of a progressive community at the present time. According to the New Constitution Association of Missouri, which is composed of men and women in all parts of the state and in all walks of life, Missouri's constitution is out of date, having been framed in 1875, just following a panic and now restricts development; it breeds waste of taxes by barring a state budget system; it has made Missouri rank thirty-fourth in education by crippling the rural school districts; it is silent about modern conditions of public health and child welfare and makes no provision for courts of domestic relations or juvenile courts of proper jurisdiction; it delays justice, the supreme court being about two years behind its docket owing to constitutional provisions; it disfranchises Missouri soldiers, sailors and marines, denying the ballot to men ready to lay down their lives for the nation; it keeps Missouri in the mud, making impossible any comprehensive good roads program except by changing its obsolete terms; it discourages essential public improvements simply because forty-five years ago Missouri was suffering from wild-catting in railroad bonds; it is a straightjacket on our cities, especially St. Louis, Kansas City, St. Joseph, Joplin and Springfield.

## MEMBERSHIP CHANGES, SEPTEMBER

### NEW MEMBERS

Hardesty, William L., Weston.  
Willis, John B., Smithville, R.F.D. Ferrelview.

### CHANGES OF ADDRESS

Barnes, Algernon S., Jr., 5589 Vernon Ave., St. Louis, to Box 648, Albuquerque, N. M.  
Boehm, Joseph L., 715 N. 8th St., St. Louis, to Box 264, Grand Central Station, New York.  
Diven, Thomas H., Wellsville, to 47 Virginia Ave., St. Louis.  
Hatcher, Ephraim D., Glenwood Sanitarium, Kirkwood, Mo., to Commonwealth Steel Co., Granite City, Ill.  
Hawley, Nelson J., 225 Field Bldg., St. Louis, to 220 Lister Bldg.  
Hogan, Frank E., Bigelow, to Mound City.  
Lester, Franklin W., Colton, Calif., to Scappoose, Ore.  
Marquardt, Arthur V., 500 Century Bldg., St. Louis, to 977 Arcade Bldg.  
Nietert, Herman L., 500 Century Bldg., St. Louis, to 977 Arcade Bldg.  
Pulliam, Madison J., 2800 Chippewa St., St. Louis, to 806 University Club Bldg.  
Ratliff, Harry L., Webb City, Mo., to 511 Wilm Bldg., Dallas, Texas.  
Reyes, Anthony R., Missouri Pacific Hosp., St. Louis, to Santa Rosa Infirmary, San Antonio, Texas.  
Schudde, Otto N., Sullivan, to Ferguson.  
Sevier, Robert, Richmond, Mo., to 1342 W. Oak St., Fort Collins, Colo.  
Sherwin, Charles F., 5952 Romaine Pl., St. Louis, to 1493 Hodiamont Ave.  
Sisson, William B., Kahoka, to Trust Bldg., Hannibal.  
Stewart, John W., City Hosp., St. Louis, to 215 Lister Bldg.  
Wesseler, Fred W., 3195 S. Grand Ave., St. Louis, to 2055 Blendon Pl.  
Wrinkle, Thomas D., Pittsburg, to Half Way.  
Wyche, Charles, 1207 Chemical Bldg., St. Louis, to 601 Compton Bldg.

### DECEASED

Miller, John J., 6255 Waterman Ave., St. Louis.

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COLORADO moth balls sold as "gasoline economizers" is one of the latest frauds for separating the motorist from his money, we learn from a report of the Vigilance Committee of the Associated Advertising Clubs. The stuff is sold also



in liquid and powder form, usually by letter. "It is advertised," says the Vigilance Committee, "as a substance which eliminates carbon" and frees the motorist from other miseries while at the same time it "increases gasoline efficiency anywhere from 15 to 100 per cent." The stuff in whatever form it is advertised is a preparation of naphthalene, which is the preparation used in making the ordinary moth ball of commerce. Fanciful names are given to it by the various producers, among which we note: "Gas Aid," "Miracle Motor Gas," "Ogasovim," "Nitro-Lene." Says the Vigilance Committee:

Pseudoscientific explanations are given for the benefit of the gullible who like to know all about the things they buy.

They learn something that certainly was never dreamed of in any philosophy so far studied, if they digest this:

"NITRO-LENE is a chemical discovery that attacks and softens the skin or covering on the globules of Gasoline, causing them to dissolve the mixture quickly, and releasing the imprisoned gas, thus becoming more explosive and more powerful giving a faster and more even combustion."

This is a fair sample of the "reason why" copy put out by the advertisers in question. The usual guarantee goes with it. This is safe enough as the majority of people will not trouble to demand money back when the amount involved is only a dollar. Also there are positive statements, sometimes in the form of a chemist's report, to the effect that the preparation is harmless to the machinery. We have not yet seen any chemist's report in any of this advertising that includes a statement of the efficiency of the product.

The advertisers are careful to call attention to the fact that there is no camphor in the stuff. This is quite true. Camphor is an expensive drug and is not a constituent of moth balls, although many people think moth balls are made of camphor. Naphthalene is cheap and that is what moth balls are usually made of. The United States Bureau of Chemistry has tested some of these products and has this to say about them:

The natural conclusion from the tests so far performed is that nearly, if not quite all, the seeming improvement in engine operation when these "elixirs," etc., are added to the gasoline is due to the reduction in the proportion of gasoline used, caused by readjustment in the carburetor, which is nearly always recommended to be made when the new fuel "dope" is added. It is of course a well known fact that many engines, particularly automobile engines, are habitually operated on too rich a mixture, mainly for the sake of ease of starting and satisfactory operation when first started, and that the reduction in the proportion of gasoline to air will often produce all the desirable results claimed for these "tonics," etc., without the addition of any foreign material whatever.

## OBITUARY

KIRBY L. GARNER, M.D.

Dr. Kirby L. Garner of St. Louis was the victim of a speed maniac driving a motor cycle at high speed when he collided with the doctor's machine on August 5. Dr. Garner suffered a fracture of the skull and died a few hours later at the hospital. The death of Dr. Garner removes one of the promising members of our association, for he had shown unusual abilities in his work and was well equipped to distinguish himself in the field of medicine. He graduated from the Beaumont Hospital Medical College in 1901 and for a number of years practiced in Perry County, first at Crosstown and later at Perryville. He served in the Medical Corps of the Army during the World War with the rank of first lieutenant, and a few months after his return from service he moved to St. Louis, where he had practiced for about a year. He was 41 years old and leaves a wife and one daughter. He was buried at Perryville, the members of Perry County Medical Society serving as pallbearers.

## MISCELLANY

### ST. LOUIS CLINICS' FIRST YEAR

The St. Louis Clinics Section of the Medical Society starts its second year October 1 and it might be well to briefly review for the benefit of the entire society some of the accomplishments of this section in its first year just ending.

There are 145 members at present in the section. There have been scheduled in the daily *Bulletin* 12,438 clinics held by 138 members. These clinics have been attended by ninety-three registrants from twenty-one states. The average stay of these registrants has been ten days. Inquiries have been received from all parts of the country from 353 prospective registrants in response to 2,160 daily bulletins mailed to physicians in Missouri and surrounding states and to notices appearing weekly in *The Journal of the American Medical Association* and monthly in eleven state journals.

The Section will finish its first year without incurring any indebtedness whatever; in fact, there will be a small balance to its credit. Considering the fact that the first year of any organization is always the most expensive and the further fact that materials of all kinds have increased in cost many fold, we have every reason to feel elated over the financial condition of the Section.

The interest of physicians in cities all over the country has been shown not only by the numerous inquiries received in the office but by direct inquiries from members of the board of directors and other members of the clinics who have visited these cities during the past few months.

For several months *Surgery, Gynecology and Obstetrics*, the foremost surgical journal of America, has carried notice of clinics held regularly in New York City, Philadelphia, Chicago, Rochester, Minn.; Lon-

don, England, and St. Louis. It is a rather significant fact that St. Louis is placed along with cities of this class in the matter of clinics. In fact, this is the first approach of our city towards a position on the medical map to which it is so eminently entitled.

It should be quite evident to every physician in St. Louis that the movement started by the St. Louis Clinics is one of great civic importance. The mere fact that inquiries concerning the St. Louis Clinics together with public notices of them come from such a widely scattered portion of the United States and even from some foreign countries should fill every physician in this city with pride. The board of directors of the St. Louis Clinics has contended from the beginning that the chief aim of this movement was civic in nature and that it was for the good of St. Louis medicine and the profession of St. Louis as a whole and what it has accomplished bears out the belief of the board.

The St. Louis Clinics is a Section of the St. Louis Medical Society and every member of the St. Louis Medical Society in good standing is eligible to membership in this Section. The board of directors urges the cooperation and hopes for the hearty support of every member of the Society.—*Bulletin St. Louis Medical Society*.

#### MEETING OF THE ADVISORY COMMISSION ON MENTAL DEFICIENCY

The first meeting of the Advisory Commission on Mental Deficiency was held in the Capitol at Jefferson City, September 15. The following members or representatives of members were present: Dr. Thomas H. Haines, Dr. M. A. Bliss, Dr. R. P. C. Wilson, Dr. George H. Jones, Dr. E. J. Goodwin, Mr. J. Kelly Poole, Mr. J. L. Wagner, and Prof. A. F. Kuhlman.

The meeting was called to order by Dr. M. A. Bliss, who acted as temporary chairman. He was then elected permanent chairman. This action, however, was reconsidered at the suggestion of Dr. Bliss because of the desirability of having the officers of the commission reside in Jefferson City and therefore in close touch at all times with Dr. Haines. Dr. Jones was then elected president and J. L. Wagner, secretary. A publicity committee, composed of Mr. Kuhlman, Mr. Poole and Dr. Goodwin, was appointed to direct publicity work in connection with the survey.

At the suggestion of Dr. Bliss, Dr. Thomas H. Haines was invited to outline what he considered the most effective manner in which the commission could assist his work, and how he and his staff could be of most assistance to the members of the commission and the cause which they represent.

Dr. Haines outlined very succinctly the general plan for the survey and told of accomplishments that have already been completed and of undertakings that have been started. Two methods for assistance by the commission were suggested: (1) to help define the work and to carry on lines of inquiry; (2) to take results of the survey and use them in the best and most effective manner. That is, after the actual field and research work of Dr. Haines and his assistants has been completed, important work will still remain for the commission to do to secure actual expression through legislation, administration and other means, of the principles established and recommendations made. The commission is to be the standing body, ready to receive and pass along information secured.

Dr. Haines told of the mental survey that has been made of girls in the Industrial Home at Chillicothe. It was also brought out that the survey has already resulted in a complete physical test being made of the girls in connection with the survey on mental deficiency under direction of the state and federal public health service. One of the excellent results of this work is the testing of every girl in the institu-

tion for venereal disease, this phase of the work being done by the laboratory of State Hospital No. 1.

There are three important fields to be covered by the survey, according to Dr. Haines. The first relates to the problem of delinquency. This will involve a careful study of public reformatories, industrial schools, workhouses, and probably other institutions where delinquents are found. The second aspect of the study has to do with dependent children, especially those found in private and public orphanages. There are something like 2,700 of this class in St. Louis institutions. The third line of investigation will be with the public school children. It is expected that rural schools in cross-sections of several typical counties may be covered rather thoroughly. It is also hoped that several of the larger city schools in which work of testing children for mental defectiveness has not been undertaken may be helped by having these tests made.

Dr. Haines elaborated on the possibilities of the survey with reference to each of these three classes. A letter from Mr. Harris, superintendent of the schools of Joplin, was mentioned, in which he requested an expert examiner to test the 216 children who have been classified as subnormal. It was brought out that a number of the larger towns and cities in the state are in need of immediate service of this kind and it would be most helpful if the commission could do something to secure this important help for those in need of it.

Among the interesting suggestions for possible work was one made by Dr. Bliss relative to the importance of having expert mental examiners in connection with police courts in our larger cities. It was proposed that, as a means of necessary education, a member of the commission or some other interested and capable person, might visit one or more of the city courts for a period of several days, with a view to finding and collecting definite material to be used. Attention was called to the expensive machinery—the judges, bailiffs, juries, attorneys, witnesses and other court officers who are necessary in the prosecution of criminal charges, and that too frequently the offenses are the result of feeble-mindedness, especially those who are known as recidivists or who have served two or more terms in county and city jails and penitentiaries. It was brought out that persons have been sentenced and committed to prison as many as thirty or forty times and that almost invariably these are mental defectives. With proper care, the great trouble and expense involved in conducting their trial and conviction would be avoided if they were given adequate examinations by persons who are trained and prepared for this service.

Another development brought out at the meeting was the possibility of conducting field inquiries concerning one or more families in the state which show a marked prevalence of feeble-mindedness. Dr. Wilson, superintendent of the State Colony for the Feeble-minded, mentioned several families which he believed would show marked resemblance to the renowned Kallikak family if adequate means might be provided for doing the actual field work required for a thorough investigation. It was proposed that the State University should furnish two or more investigators to work in conjunction or cooperation with Dr. Wilson in tracing out the family history in one or more feeble-minded groups.

After some discussion of the advisability of recommending a state law authorizing sterilization of the feeble-minded and other defectives, Dr. Wilson was appointed a committee of one to investigate this question further and report at the next meeting. Dr. Wilson gave several illustrations to show the need of a drastic remedy to be applied by society for diminishing the excessive burden of feeble-mindedness and other defects growing out of this malady.



The question of restricting the increase of feeble-mindedness by means of marriage laws was considered to some extent. Mr. Poole was appointed a committee of one to make inquiries relative to experiences of other states in regard to marriage laws, and report at the next meeting.

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1920

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Webster County Medical Society, Dec. 1, 1919.  
 Madison County Medical Society, Dec. 2, 1919.  
 Livingston County Medical Society, Dec. 31, 1919.  
 Schuyler County Medical Society, Jan. 9, 1920.  
 Benton County Medical Society, Jan. 23, 1920.  
 Camden County Medical Society, Jan. 28, 1920.  
 Linn County Medical Society, Feb. 24, 1920.  
 Ralls County Medical Society, March 8, 1920.  
 Ste. Genevieve County Medical Society, March 17, 1920.  
 Atchison County Medical Society, March 26, 1920.  
 Chariton County Medical Society, April 6, 1920.  
 Cass County Medical Society, April 7, 1920.  
 Clinton County Medical Society, June 15, 1920.

### PEMISCOT COUNTY MEDICAL SOCIETY

The Pemiscot County Medical Society met in the Hall of Commerce in Caruthersville, Tuesday, August 17, at 2 p. m. Dr. Pinion called the meeting to order with the following members present: Drs. Collins, Michie, Grainger, Phipps, Bryant, Pinion and Cooper.

Dr. W. J. McWaters of Bragg City and Dr. J. A. Bryant of Steele were elected to membership.

Drs. Grainger, Collins and Cooper were appointed a committee to make arrangements for an outing for the society to be held on the river below Caruthersville, Tuesday, August 24.

Dr. Grainger of Caruthersville read a paper on "The Differentiation of Chancre and Chancroid," that was enjoyed and discussed by every member present.

L. E. COOPER, M.D., Secretary.

### VERNON COUNTY MEDICAL SOCIETY

In response to the call of the president and secretary the Vernon County Medical Society held its regular session in the Courthouse at Nevada on Thursday afternoon, August 12. Two visitors were in attendance, Dr. E. J. Goodwin of St. Louis, who is secretary of the State Medical Association and edits the JOURNAL, and Dr. Charles C. Dennie of Kansas City. In addition to these gentlemen the society was represented by Drs. Dawson, Hornback, Craig, Yater, Amerman, Bohannon, McLemore, Willson, Callaway, Dulin, Walker, Keithly, Schaff, and Popplewell, and Williams of Eldorado Springs. The morning was spent in one of our hospitals where numerous clinics of disease of the skin were examined by Dr. Dennie and treatment suggested. He also removed a papilloma from the upper eyelid of a woman which improved her appearance very much. The afternoon session was held in the Courthouse. Dr. Goodwin addressed the society in regard to subjects that may come before the next meeting of the legislature pertaining to the medical profession that are not only objectionable to the profession in general but also to the people as well. Concerning this legislation it should

be the duty of every physician in Missouri to interview his member of the senate and house and explain to them why all bills should be defeated that license the many "isms" that are trying to be legalized.

Dr. Dennie then delivered a masterly address on venereal diseases which was much appreciated. Many questions were asked and kindly answered as to treatment. Dr. Dennie was in the service in France during the World War, having charge of a division in his specialty of 200,000 or more men, with thirty-two physicians on his staff, each of whom was a specialist in venereal diseases. His lecture was fine and words will not express our appreciation, as he dealt with a class of diseases so very prevalent and of so much danger to the human race through acquisition and heredity. He recommended arsphenamin for young patients and in early syphilis and neo-arsphenamin for late syphilis and for the syphilis of old people. For shock following the intravenous use of arsphenamin he recommended epinephrin hypodermically. He also stated that sodium hypophosphite was antidotal to arsenical poisoning by arsphenamin and also for arsenic itself. An editorial in the *Medical Record* of Nov. 11, 1916, relates the experiments of Fantus in the uses of sodium hypophosphite in mercurial poisoning with good results. He uses one part of the sodium hypophosphite and five parts of hydrogen peroxid. This combination of a reducing and oxidizing agent has no chemical justification but his results were uniform and he suggests the explanation that the peroxid acts as a catalyzer, that is, it produces a chemical change without chemical combination. Fantus is careful to state that the eliminative treatment of Patterson and Lambert should not be neglected. The author advises that if the amount of poison taken is known, the amount of the hypophosphite used should be ten times the amount of the bichlorid taken, but as this dose might be poisonous it would be wise to wash the stomach thoroughly after using it, while a very dilute solution of the antidote and a safer dose can be left in the stomach. Dr. Dennie leaves in the stomach two and one half times as much of the hypophosphite as of mercury taken. This doctor pictured France as being in a most deplorable condition because of the wide spread of syphilis which threatens extermination. Russia, he says, is in the same condition, practically all of the rural population and much of the urban being syphilitic.

The doctor examined a case of carcinoma in a man aged about 50 years in which the right upper maxilla and the soft structures of the gingivae are extensively affected. He recommended a thorough cauterization of the parts with the actual cautery.

After minor business was transacted the society elected Dr. Dennie an honorary member—Dr. Goodwin having been elected long ago—and expressed its appreciation of the visit from these two gentlemen by a unanimous vote of thanks.

The society then adjourned until October next.

E. A. DULIN, M.D.

## BOOK REVIEWS

X-RAY OBSERVATIONS FOR FOREIGN BODIES AND THEIR LOCALIZATION. By Capt. Harold C. Gage, A.R.C., O.I.P., Consulting Radiographer to the American Red Cross Hospital of Paris, etc. St. Louis: C. V. Mosby Company, 1920. Price, \$1.75.

The papers were written by Gage in 1917 and intended as a chapter for a work that was later aban-

doned. The monograph was compiled by Joseph A. Blake, Colonel, M. C., U. S. Army.

The localization of foreign bodies as described was used at the hospital at Ris Organig during the years 1917 and 1918. After general description of the necessary apparatus for successful work the various methods are described. The methods are: the markings on the skin at various angles, the stereoscopic pairs of plates, tracing with cryptoscope, geometrical localizations, or the localization by triangulation. Electrical methods, compass methods and probe insertions, are described. The removal of foreign bodies under the fluorescent screen is considered and a section for roentgen ray operators is added.

The book contains 82 pages with numerous illustrations. The mechanical work is good. E. H. K.

**EXOPHTHALMIC GOITER AND ITS NONSURGICAL TREATMENT.** By Israel Bram, M.D., Instructor in Clinical Medicine, Jefferson Medical College, Philadelphia; Physician on Visiting Staff of Philadelphia General Hospital; Member of the Society for Study of Internal Secretions, etc. St. Louis: C. V. Mosby Company, 1920. Price, \$5.50.

At first glance the title of this book is misleading. One might suppose that the book is of interest to those only who depend exclusively on the nonsurgical treatment of exophthalmic goiter. On the contrary, the book contains a very comprehensive presentation of all the phases of the disease save the operative treatment. Nowhere else are the general phases of the disease, particularly the diagnosis, so well presented as here. This feature makes the book even more to be commended to the surgeon than to the internist.

A. E. H.

**SURGICAL SHOCK AND THE SHOCKLESS OPERATION THROUGH ANOCI-ASSOCIATION.** By George W. Crile, M.D., Professor of Surgery, School of Medicine, Western Reserve University, Cleveland; and William E. Lower, M.D., Associate Professor of Genito-Urinary Surgery, School of Medicine, Western Reserve University, Cleveland. Second edition of "Anoci-Association," thoroughly revised and rewritten. Octavo of 272 pages, with 75 illustrations. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, \$5 net.

Here we have a book on surgical shock which makes clear to the troubled mind of the surgeon why his patients at times die on the table so soon following operation. The authors have set forth in absorbable style a method of preparing patients for the eventful occasion, allaying fear, lessening excitement, stimulating confidence, and happily terminating the operation with the patient showing a minimum amount of depression and in the vast majority of cases no shock.

The book is essentially on shock but in dealing with the methods of prevention, opportunity is taken to deal with practically every branch of surgery and its relation to anesthesia. The chapters on the cause, pathology and treatment of shock are unusually interesting, the illustrations illuminating, and the subject thoroughly discussed. Anoci-association is dealt with in a practical way by giving an idea in a concise and interesting manner, which stimulate an appetite for the following chapters on the application of anoci-association to the various surgical operations. The "don'ts" following some of these chapters should be carried to the operating room by every surgeon, for in these often rests the happy outcome of the operation. The subjects of anesthesia and blood transfusion are dealt with in a characteristic manner throughout the book.

The book is written in a style that holds one well past the bed hour and it deserves a place on every surgeon's desk. W. K.

**THE TREATMENT OF WOUNDS OF LUNG AND PLEURA.** Based on a Study of the Mechanics and Physiology of the Thorax. Artificial Pneumothorax—Thoracentesis—Treatment of Empyema. By Prof. Eugenio Morelli, Assistant in the Medical Clinic of the Royal University of Pavia, Maggiore Medico, Field Hospital No. 79. Translated from the Italian by Lincoln Davis, Formerly Lieutenant-Colonel, M. C., U. S. Army, and Frederick C. Irving, Formerly Major, M. C., U. S. Army. Boston: W. M. Leonard, publisher, 1920.

This book presents in a comprehensive way the Italian method of treating war wounds of the chest by open evacuation of the blood clots and irrigation. In cases of existing hemorrhage the intrathoracic pressure is increased by the injection of air. Wounds of this extent seldom come to the attention of the civilian surgeon, but when they do come one will be better fortified if he has read this book. A. E. H.

**HUMAN PARASITOLOGY.** With Notes on Bacteriology, Mycology, Laboratory Diagnosis, Hematology and Serology. By Damaso Rivas, M.D., Ph.D., Assistant Professor of Parasitology and Assistant Director of the Course in Tropical Medicine, University of Pennsylvania. Octavo volume of 715 pages with 422 illustrations and 18 plates, most of which are in colors. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, \$8 net.

In this new book the animal parasites are given chief consideration, the biologic classification being used in the method of presentation. A short chapter is devoted to parasitic fungi, etc. In the appendix the portions devoted to bacteriology, hematology and serology do not add value to the book because these subjects are discussed too briefly to be of practical value and some of the methods recommended are not the best available.

In its particular field Rivas' book occupies a position which may be compared to the position occupied by the popular textbooks on bacteriology in the field of bacteriology, i. e., they do not satisfy the needs of either the bacteriologist or the clinician. It is evident that the author of the volume before us was frequently compelled for want of sufficient space to touch lightly or to omit altogether, points which are essential to the needs of both clinician and pathologist. However, the references at the end of each chapter will be of value to the reader who wishes to obtain information not contained in the book.

The author undertook a large task which he successfully accomplished. That the book is incomplete in details the reviewer does not regard as an unfavorable criticism. G. I.

**RADIOGRAPHY IN THE EXAMINATION OF THE LIVER, GALLBLADDER AND BILE DUCTS.** By Robert Knox, M.D., Honorary Radiographer, Kings College Hospital, London, England. A series of articles reprinted from "Archives of Radiology and Electrotherapy," July, August, September and October, 1919. (Printed in Great Britain.) Sixty-four illustrations. St. Louis: C. V. Mosby Company, 1920. Price, \$2.50.

The subjects are well covered and show the writer a master of the matter considered. The reviewer took pleasure in reading the collected papers.

E. H. K.

**ARMY MENTAL TESTS.** Compiled and edited by Clarence S. Yoakum and Robert M. Yerkes. Published with the authorization of the War Department. New York: Henry Holt and Company, 1920.

One of the very interesting and useful developments growing out of the intense hurry and stress of the war



was the working out of a practical method for group examination in mentality.

The proper utilization of the brain power of the nation depended on the rapidity and accuracy with which a survey could be made to the end that each man in the service be placed where he might be of most help.

Under the adjutant-general, the committee on classification of the personnel in the army developed and introduced throughout the army, methods of classifying and assigning enlisted men in accordance with occupational and educational qualifications, and methods of rating officers for appointment and promotion. The swiftness with which these methods were developed out of the material existing at the beginning of the war, and the close correlation of the results with all other known ways of classification are astonishing. To those of us who were fortunate enough to have been present when the tests were given, to take them ourselves, and to live in the camps among men whose ratings were known to us, there is an almost uncanny feeling in reflecting on the accuracy of this "mental tape measure."

The men who devised and applied the tests, however, gave repeated and emphatic caution that all the qualities of a man may not be measured by this means. They claimed only that a most important factor in "getting the round pegs in the round holes" was estimated in this way.

This little book is positively fascinating, containing as it does a full account of the development and application of the tests, the methods, the results and their comparison with other methods of estimation. It is sure to be read with keen interest by those whose eyes were opened by the war to the first importance of mental level in the success, happiness and stability of our nation.

M. A. B.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of *New and Nonofficial Remedies*, 1920, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**STERILE SOLUTION OF LUTEIN**—H. W. D.—Each cubic centimeter contains the water-soluble extract of 0.2 Gm. lutein-H. W. D., freed of protein in physiological solution of sodium chloride. For a discussion of the actions and uses of ovary preparations, see *New and Nonofficial Remedies*, 1920, p. 201. The solution is supplied in the form of Ampules Sterile Solution of Lutein-H. W. D., containing 1 Cc. Hynson, Westcott & Dunning, Baltimore.

**OVARIAN RESIDUE**—H. W. D.—The residue from the fresh ovary of the hog, after the ablation of the corpus luteum. Ovarian Residue is used for the same conditions as the entire ovarian substance, but is claimed to have the advantage of being somewhat more stable. Ovarian Residue-H. W. D. is supplied in the form of 5 grain tablets only. Hynson, Westcott & Dunning, Baltimore (*Jour. A. M. A.*, Aug. 7, 1920, p. 378).

**BENZYL BENZOATE**—SEYDEL.—A brand of benzyl benzoate complying with the tests and standards of *New and Nonofficial Remedies*. For a discussion of the actions, uses and dosage of benzyl benzoate, see *New*

and *Nonofficial Remedies*, 1920, p. 48. Seydel Manufacturing Company, Jersey City, N. J.

**TABLETS ANTERIOR PITUITARY-ARMOUR 5 GRAINS**.—Each tablet contains 5 grains of desiccated pituitary substance (anterior lobe Armour (See *New and Nonofficial Remedies*, 1920, p. 207). Armour & Co., Chicago.

**TABLETS OVARIAN SUBSTANCE-ARMOUR 5 GRAINS**.—Each tablet contains 5 grains of Ovarian Substance-Armour (See *New and Nonofficial Remedies*, 1920, p. 202). Armour & Co., Chicago.

**RIODINE**.—A 66 per cent. solution in oil of an iodine addition (See Iodine Compounds for Internal Use, *New and Nonofficial Remedies*, 1920, p. 143). Riodine is supplied only in the form of Riodine Capsules 0.2 Gm. E. Fougera & Co., Inc., New York (*Jour. A. M. A.*, Aug. 14, 1920, p. 477).

### PROPAGANDA FOR REFORM

**DIGITALIS THERAPY**.—Thanks to the development of appropriate methods of physiologic assay, digitalis preparations can now be evaluated in terms of their real potency, and products can be prepared which are stable and constant as the pharmacopeial standards demand. Physicians have learned, largely through the leadership of Cary Eggleston, how to estimate digitalis dosage on the basis of body weight. As the possibility of overdosage can be recognized by the occurrence of symptoms such as nausea, or by the electro-cardiograph, it becomes possible to push the dosage speedily to the limit of tolerance, with corresponding therapeutic advantage. There remains, however, the important need of differentiating more clearly the patients for whom digitalis is actually indicated (*Jour. A. M. A.*, Aug. 7, 1920, p. 417).

**INTERNAL AND EXTERNAL ANTISEPSIS**.—Despite the numerous efforts to demonstrate the efficacy of this or that chemical agent or drug as a gastro-intestinal antiseptic, the outcome has been that the supposed benefits were due to catharsis in most instances rather than to any real effect upon the bacteria in situ. Similarly, J. F. Norton, in an investigation made for the Council on Pharmacy and Chemistry, has shown that the value of "antiseptic" and "germicidal" soap depends on the soap and not on the antiseptic or germicide contained in them. In fact, ordinary toilet soap and the green soap used by surgeons were more efficient, evidently because the added antiseptics and germicides interfered with the lathering qualities of the soap (*Jour. A. M. A.*, Aug. 14, 1920, p. 478).

**THE BETHLEHEM LABORATORIES, INC., PREFERRED STOCK**.—Physicians in various parts of the country have received advice that they have been selected to share in the profits of the Bethlehem Laboratories, Inc., New York City. The company claims to control the manufacture of hyclorite, a product accepted by the Council on Pharmacy and Chemistry. These physicians are given an option to purchase four shares of the company's stock for \$400. The directorate of the Bethlehem Laboratories, Inc., is stated to be composed of business men of Bethlehem, Pa., the president of the General Laboratories, Madison, Wis., a "prominent physician" of Bethlehem, and J. Jay Reilly, Philadelphia, a "prominent Philadelphia surgeon and consulting chemist to several large manufacturing drug concerns." Hyclorite, manufactured by the General Laboratories, Madison, Wis., was accepted by the Council on Pharmacy and Chemistry for inclusion in *New and Nonofficial Remedies* because at the time it was considered it was marketed in accordance with the Council's rules. The investment proposition which the Bethlehem Laboratories makes to physicians is an insult to decent medical men. When

physicians are interested in products they prescribe or recommend, the public does not get a square deal. It is against public interest and a degradation of scientific medicine for physicians to be financially interested in the products they prescribe (*Jour. A. M. A.*, Aug. 14, 1920, p. 493).

**QUININ AND UREA HYDROCHLORID FOR LOCAL ANESTHESIA.**—Quinin is a protoplasmic poison and tissue necrosis may be caused by strong solutions of quinin salts. That this deleterious reaction actually does occur and has mitigated against the general use of quinin and urea hydrochlorid is confirmed by the report of the Committee of the A. M. A. on the Advantages and Disadvantages of Local Anesthesia in Nose and Throat Work. The committee reported that the only local anesthetic that produces edema and sloughing is quinin and urea hydrochlorid. The committee found that, as this local anesthetic has been abandoned in other fields of medicine, so it has been discarded for use in nose and throat operations. Two physicians who had published articles extolling the value of quinin and urea hydrochlorid in nose and throat operations now state that they have discontinued its use, though they had not published this unfavorable conclusion (*Jour. A. M. A.*, Aug. 21, 1920, p. 559).

**VALUE OF SCHICK TEST.**—The Schick test, which can readily be applied to a large number of persons, makes it possible to differentiate those immune from those susceptible to diphtheria. It also facilitates the attempt to increase the number of the immune by suitable prophylactic toxin-antitoxin injections. By the use of the Schick test and toxin-antitoxin injections, institutions have been kept free from cases of diphtheria for years (*Jour. A. M. A.*, Aug. 21, 1920, p. 545).

**SUKRO-SERUM AND APHLEGMATOL.**—About two years ago, American newspapers contained accounts of an alleged cure for pulmonary tuberculosis "discovered" by Prof. Domenico Lo Monaco of Rome, Italy. Reports indicated that this so-called Italian Sugar Cure for Consumption consisted of the intramuscular injection of solutions of sucrose (saccharose—cane sugar). Now the Council on Pharmacy and Chemistry reports on two proprietary preparations based on the "sugar cure" which are being exploited in this country: Sukro-Serum and Aphlegmatol. Sukro-Serum is marketed by the Anglo-French Drug Company. A circular issued by this company described Sukro-Serum as a "STERILIZED SOLUTION OF lacto-glucosaccharose." By reading this circular to the end, however, one learns that "Sukro-Serum" is not a "serum" in the ordinary sense, but apparently it is a solution of ordinary sugar (sucrose). Aphlegmatol is sold by G. Giambalvo & Co. The circular enclosed with a package of this preparation contains the following, with reference to the composition: "A solution of Hydrate of Carbon after the formula of Professor D. Lo Monaco, Director of the Institut of Physiological Chemistry of the University of Rome. Contents: Sucrose ( $C_{12}H_{22}O_{11}$ ) Glucose and Galactose ( $C_6H_{12}O_6$ )." The preparation was found to contain a reducing substance, probably glucose, amounting to about 7.4 per cent. After hydrolysis, 55.5 per cent. of glucose was found. The advertising for Aphlegmatol appears to be the work of those ignorant of the English language. These two preparations appear to be nothing more than concentrated solutions of sugar. It is probable that a small amount of cane sugar might be inverted into glucose and fructose, but experiments have shown that cane sugar subcutaneously administered in the small amounts used in this instance is largely excreted in the urine unchanged. Less is known about galactose, but the evidence available would indicate that galactose is largely excreted

in the urine unchanged when given subcutaneously. Glucose would be absorbed as such, and the amounts under consideration, used by the system much the same as when given by mouth (*Jour. A. M. A.*, Aug. 21, 1920, p. 556).

**MORE MISBRANDED NOSTRUMS AND DRUG PRODUCTS.**—The following products have been the subject of prosecution by the federal authorities under the Food and Drugs Act: Tonic Remedy, a nostrum of the alcoholic type was misbranded because the label failed to show the quantity or proportion of alcohol present. Big G., said to be "A Compound of Borated Golden-seal," was essentially a watery solution of boric acid and berberin. Plantation Sarsaparilla consisted essentially of potassium iodid, alcohol, plant material, sugar and water. Magic Eye Salve consisted essentially of zinc oxid, benzoic acid and petrolatum. Femenina consisted essentially of alcohol, sugar, water and unidentified material with indications of valerian. Balsam Copaiba, Salol Compound, and Methylene Blue Compound (The Evans Drug Mfg. Co.), were capsules which were below standard in strength and purity. Pabst's Okay Specific consisted essentially of volatile and fixed oils, plant extractives, including cubeb, balsam of capaiba and buchu, and more than 29 per cent. of alcohol. Liebig's Diarrhoea Cordial consisted essentially of a solution of morphin sulphate, catechu, tannin, oil of cassia, oil of peppermint, sugar, alcohol and water (*Jour. A. M. A.*, Aug. 28, 1920, p. 623).

**SILVER SALVARSAN.**—According to a report of the Medical Research Committee of Great Britain, silver salvarsan is apparently a molecular combination of arsphenamine and silver in some form. The substance is on trial, and its promiscuous use at this time would be ill advised. In the United States no license for the sale of silver salvarsan has been granted by the Treasury Department and hence it may not be sold in interstate commerce (*Jour. A. M. A.*, Aug. 28, 1920, p. 626).

**IODEX AND LIQUID IODEX.**—The A. M. A. Chemical Laboratory examined Iodex in 1915 and found that it contained only traces of free iodine, though claimed to contain "5 per cent. therapeutically free iodine." Even the total quantity of iodine was shown to be only about one half of the 5 per cent. claimed to be present as free iodine. An analysis of the Iodex sold in 1919 demonstrated that the preparation is essentially the same as that sold in 1915, that is, it was found to contain no free iodine and only about three fifths of the total amount of iodine claimed. The laboratory points out that the synonym used for Iodex, "Ung. Iodi, M. and J." is in obvious conflict with the Food and Drugs Act in that, though sold under a name recognized in the U. S. Pharmacopeia, it does not conform to the standards for Ung. Iodi, of the pharmacopeia. The laboratory further reports that Liquid Iodex, sold with the claim that it is a preparation having the properties of free iodine, is a reddish liquid with an odor like oleic acid, containing but little (0.16 per cent.) free iodine and only about three fifths of the total iodine claimed (Reports of the A. M. A. Chem. Lab., 1919, p. 104).

**I. G. O.**—According to Dr. H. S. Lambdin, Peru, Kansas, I. G. O. is: saturated solution of iodine gas in petrolatum at 130 degrees with oil of eucalyptus. The heat of the body liberates the iodine and it is absorbed as free iodine. The A. M. A. Chemical Laboratory reports that the sample of I. G. O. was a black ointment, green in thin layers, with a slight odor like crude petroleum, containing but 0.59 per cent. of free iodine (Reports of the A. M. A. Chem. Lab., 1919, p. 106).



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### ORIGINAL ARTICLES

#### SOCIAL MEDICINE \*

SCOTT P. CHILD, M.D.  
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##### I. THE PROBLEM AND INDICATIONS

The forces of nature in both the inorganic and organic world have been advancing in the past in accordance with the established laws of evolution. But in this process straight lines and a perfect equilibrium are unknown. Cataclysms not infrequently occur. And looking back the scientist believes all such eruptions and unrest represent life, growth, progress.

Human society, historically, is 8,000 years old. The evidence in records left of this period indicates cycles of perhaps 1,000 years, in which the civilization of each cycle seems much the same in its discoveries, life and application of fundamental principles. And the question naturally arises as to whether real human development has resulted. Are we wiser and more advanced than the Egyptians and Assyrians, whose records and living conditions we uncover today? Vaughn of Michigan has only recently raised the question, in view of the prevalence and lack of control of infectious diseases, especially tuberculosis, "if our civilization is superior to the ancients"? However, with all the facts present and many of them lamentable, there are specific and auspicious social events, epoch making, which should encourage us. The abolition of slavery in America is an instance. Note also the national decree in reference to the use of liquor in Russia at the beginning of the late war, and our own prohibition enactment which was really the expression of national opinion arrived at over years of experience and thought. The government's surveys and aggressive educational propaganda anent social disease, feeble-mindedness, and tuberculosis, indicate a much more rapid

progress than is realized. The results will undoubtedly be manifest much sooner than can today be predicted.

In its physical and economic struggle for existence human society has just passed through the most critical and destructive war of history. The loss of the fertile and virile male goes up into the millions. Other millions of males have been left disabled and diseased, many of them permanently so. Still other millions of females and children have been left malnourished and subject to infection, and the vast majority in European countries are today without sufficient or proper medical attention or nursing. In America is this especially true as to nursing.

There is now waning, and it is hoped concluding, a world epidemic, the ravages and mortality of which were never before equalled. Families fertile for human reproduction were wiped out, towns depopulated and regiments reduced to a corporal's guard. It is estimated that in this epidemic of influenza India lost 6,000,000 of its population, the United States, 600,000, and Italy half a million.<sup>1</sup> Added to this, other diseases have appeared or increased, such as typhoid, typhus, malaria and tuberculosis, to the extent that the world's morbidity and mortality of the next twenty-five years are problematic. Tuberculosis, which in some countries and districts, was distinctly on the decline, has gained a new foothold and is yet the great white plague. In Italy the increase in 1918 over 1914 was from 30 to 50 per cent. In Belgrade, due to the frightful influences of the war, an already high rate of 720 per 100,000 arose to 1,453 per 100,000 in 1917. Lille, France, in 1914 had a tuberculosis rate of 330 per 100,000, which increased to 573 in 1918, while in England and Wales there was a 16 per cent. increase in 1917 over that of 1913.<sup>2</sup>

The war and epidemic likewise revealed to the world the great inadequacy of our hospital facilities. In 1915 England found it had but 4.9 beds in its general hospitals per 1,000 popu-

\* Read at the Sixty-Third Annual Meeting of the Missouri State Medical Association, Jefferson City, April 6-8, 1920.

1. Folks, Homer: War, the Best Friend of Disease, Harper's Magazine (March) 1920.  
2. Folks, H.: Harpers' (March) 1920.

lation. In America it is 3.4. The state of Pennsylvania with its large medical centers and industrial population has but between 2 and 3 beds to the 1,000. Kansas City, in its recent hospital survey, revealed but 2.5 per 1,000, and practically no charity being done save in the City Hospital.

The experience of New York and Kansas City in handling the recent epidemic was common the world over. Few of the influenza and pneumonia cases were hospitalized. In consequence the spread and mortality were very materially increased.

As never before, the past five years have been the great period of survey of the human race in matters of public health and medical progress. And while the facts revealed are massive and at times startling, they are encouraging, from the graphic portrayal of social needs, and in all probability are going to prove revolutionary in adjusting the medical profession and society. Pertinent to this may be presented certain military and vital statistics of both American and European origin. In 1913 the American Naval Reserves had 11,000 applications made to its ranks. Out of this large number only 316 were accepted as physically fit.<sup>3</sup> Of 2,500,000 candidates examined for military service in the American army 29.1 per cent. were rejected on account of physical disability. In the United Kingdom only two-fifths of the recruits were eligible for military service in the first grade. In a recent survey of four typical American cities the following percentages of "neglected illnesses" were found among all classes of citizens: New York City, 21 per cent.; Boston, 28 per cent.; Rochester, N. Y., 40 per cent.; South Framington (N. Y.), 77 per cent.<sup>4</sup>

A recent state commissioner's report in Pennsylvania shows that 385,000 of its industrial workers are constantly ill, one-fourth of whom never receive any medical aid; and that of those examined during the war for military service 46.67 per cent. were rejected because of physical disability. A surgeon of thirty years experience in Kansas City and the Southwest estimates that 50 per cent. of needy surgical conditions go unoperated annually due to insufficient means of the people and the lack of hospital beds.

Infant welfare and mortality as investigated under government supervision reveals a situation appalling, and reflecting on the medical profession as well as society in general. The estimated stillbirths in America in 1916 were 4.61 per 100 pregnancies. The infant death rate in the registration area of the United States was 101 per 1,000; in Pennsylvania, 114 per 1,000. In 1914, just previous to the war, there were reported 10,518 women as dying from childbirth.

Of this number 4,664 had puerperal fever, a disease absolutely preventable.<sup>5</sup> Along three blocks of a street in a large western city recently, lay a trail of puerperal fever following the visits of a busy accoucheur. Infection occurred at one delivery, and from this case two other parturient women were infected. This, long years after the well known treatises and work of Holmes, Pasteur and Lister. In reference to morbidity in the United States, it is claimed that every industrial worker loses on the average for sickness and disability nine days a year. Among 30,000,000 workers at only \$2 per day this would amount to \$540,000,000 (*Modern Medicine*). While it is estimated by the government survey that industrial illness and disability costs the United States conservatively \$2,000,000,000 annually.

Venereal diseases and the drink habit have broken down millions of adults physically and mentally, have transmitted to progeny feeble-mindedness and degeneracy, so that today in America 500,000 morons and imbeciles are in our public schools.<sup>3</sup> The state asylums and penitentiaries are filled with the demented and insane, products of preventable disease, false social customs and license. It is said that other countries show the same. But *we* are possessed of all the data and knowledge of history with the power of analysis to profit thereby. We know the causes and possess the means of prevention. As agents in carrying out the plan and self evident purpose of the universe, we should make our deductions and aid in establishing a different order. Such, undoubtedly, the human intellect and will are supposed to do, stimulated by the social conscience.

The question of birth rate and increase of population is one of the most important questions bearing on social welfare, and one that the biologist and physician must aid in. But today, largely due to lack of interest in and advice on the part of our profession, the nation is abusing 50 per cent. of its reproductive power, permitting myriads of abortions and miscarriages to occur, and the births of many illegitimate and diseased children. Thus, is hampered the principal purpose of social relationship, the reproduction and perfection of the human species.

Commercialism has entered into this problem in our large cities through the establishment of maternity homes by unqualified and incompetent management who respond to the cry of the unmarried pregnant woman, appealing for seclusion in her predicament. Social students and humanitarians are studying this problem. Our profession must enter it aggressively, looking at the question of sex relation solely from the biologic and reproductive standpoint. Maternity homes under the approval and direction of

3. McBride: *Mod. Med.* (Oct.) 1919.

4. Goldwater: *Mod. Med.*, (1919).

5. De Lee: *Am. J. Obst.*, 1916.



the organized profession, cooperating with a social group would do much to lessen the evil and to improve the present situation.

## II. SOCIAL MEDICINE AS PRACTISED TODAY

As we review the factors in society and industry, which today lead up to the many cases of disease, casualties and their attendant problems, and as we study the development and practice of medicine for centuries, it is noted that *individualism* has dominated. The average physician in his preparation and early practice relates himself to the case or patient rather than the general subject of disease and the health of society. So with the average patient, he thinks of the particular specialist rather than the hospital and its service in case of accident and illness. This habit of thought and social custom is very difficult to change. But without question we as a profession are in a transition and, in fact, in groups are practising social medicine without recognizing or at least admitting it. And with the busy complex and disconcerting community life, and the dangers and accidents from industrial conditions, modern sanitation and health can only be maintained through a perfected socialization of medicine.

Sir Arthur Newsholme, who is in this country advocating the socialization of medicine, has recently given one of the greatest arguments in its favor by stating that "50 per cent. of the causes of the mortality and disabilities of people under 70 years of age are preventable." In other words, under our present system of private practice, disease and disabilities are not under the control that the advance of scientific medicine justifies.

Evidence among present existing barbaric tribes and those known historically indicates that state or social medicine in some form has always existed. Ever since Moses proclaimed for the nomadic Hebrews their sanitary and health laws, and the Greeks and Romans fostered the public exhibition of the chronically diseased and injured, for popular observation and benefit, can it be said that civilized society has practised "social medicine," though its first recognition by the expressed term was in 1840 in France. England, in the broadest sense, established social medicine by parliamentary enactment under Lloyd George, and though concurred in at first with reluctance by the British medical profession, it today has their quite unanimous approval and is shared in specifically by them. And to strengthen the position, last July (1919) a newly created Ministry of Health was established and Sir Christopher Addison, M.D., was named the first Minister of Health in Great Britain. To a degree, state medicine may be said to prevail in Germany, France, Belgium, and other European countries, and is rapidly popularizing itself.

The situation in reference to social and state medicine is peculiar in the United States. It has existed sporadically for years. The federal government in and through its army, navy and marine services, has always practiced it. In the case of the Panama Canal development, a miniature United States existed from Panama to Colon, and a department of health and sanitation under Gorgas was developed which eliminated infectious disease and reduced and established a perfect state medicine throughout the Canal Zone, an example to the world.

The national quarantine laws, existing at our maritime ports against the entrance of an initial case of infection, are the strongest and most arbitrarily enforced laws in the United States. This was especially instanced on the entrance into the port of San Francisco a few years ago of a case of bubonic plague, due to a rat infected ship from the Orient. The local authorities were lax and slow in taking action. The federal government, through its quarantine officers and authority, within forty-eight hours assumed control and this one discovered and apprehended case was the only case.

The federal and state governments absolutely control and dictate to the wholesomeness of our drinking water supply in the springs and rivers of the country. The packing houses and manufacturers of food are directed and inspected by government chemists and pathologists, which assures the production of uninfected and wholesome foods.

The state governments, through their boards of health, investigate sources of disease and aid in preventing and controlling epidemics. The medical departments of our state universities are studying constantly means of prevention and cure of human and animal disease and many states are giving broadcast their findings and opinions to their citizens. State and general hospitals for the free care of all classes of disease, injuries and surgical conditions, are being established in certain states, notably Iowa and Wisconsin. And the interesting and hopeful sign is that medical men, sociologists and economists connected with this work are the most qualified and eminent in the country. Recent state legislation and bills introduced all indicate strongly the growth of social medicine. Ohio has but recently enacted the division of its state into 110 sanitary districts, each with its own sanitary officer and nurse, appointments to be made under civil service, and on adequate salaries. New York state for two years has been trying to secure legislation for the effecting of real state medicine, a practical plan, in fact, such as now obtains in England. The King's County Medical Society and the medical profession in general oppose it; but with modification such legislation will inevitably be enacted. In principle, highly specialized the "social unit" idea instituted and carried out in the

Mohawk Brighton district of Cincinnati, shows us what America is prepared for. Here, in a district with a mixed rich and poor population, thirty-five resident physicians have been organized under a director, and are responsible for the sanitary conditions and the medical practice. It is proving successful and practical and as a method of social medicine is causing just interest.

Social medicine in our industries is an established fact and is progressing so rapidly that probably ten years will see the principle applied to every factory and industry having a score or more of employees. With the growth and complexity of modern industry, the growing number of employees, and the increasing danger to health and life, it has become inevitable that employers in all manufacturing centers have had to give specific consideration to health and physical fitness in reference to efficiency. The economics involved demands it. As a result scarcely a large industry but what has its well organized and scientifically trained staff of physicians and nurses, in instances the equal of the best private hospitals. And a very important feature in many of such medical departments is that their service and supplies are absolutely free. The Endicott Johnson Corporation, tanners and shoe manufacturers, of Endicott, N. Y., have a medical and surgical staff of doctors and nurses on full time pay who take care of all medical, surgical and obstetrical cases of some 10,000 employees and their families. The company pays all salaries, and furnishes medicine, supplies and equipment.<sup>6</sup>

In the cities of southeast Wisconsin a very interesting situation has developed among some 4,000 employees of the various electric railway, light, gas and power companies. They represent 110 various industries, trades and callings, and have formed a "mutual benefit association," elected a prominent surgeon of Milwaukee as their superintendent and director, and for a small annual fee, receive the best of medical, surgical and hospital service.

Such industries as Montgomery Ward, Sears-Roebuck, Armour and the National Cloak Company, and many others, have their medical and social service departments, and are performing remarkable work in prevention of disease and accidents, and in directing physical and medical aid to their employees. And investigation proves the necessity and practicability of the service, and demonstrates again the establishment of social medicine.

Perhaps most powerful and significant in the trend towards social medicine are the research and educational institutions working under unhampered endowments, such as the Russell Sage Foundation, and the Rockefeller and Phipps Institutes. Unselfishly, unstintedly their heads

and associates have for twenty-five years been either doing or stimulating the fundamental and practical work in medicine and sanitation. The element of fame, selfish individualism or monetary reward is absent here. Their work in true discovery has been revolutionary and solely for social and human welfare in the prevention and cure of disease. Such research laboratories should be in every county of the United States and the medical profession of the respective counties qualified and in control.

#### CONCLUSIONS

In view of what has been presented, the need of a greater and broader sanitary program and medical service for society is most evident. The principles and practice of social medicine are so widely established that they must be acknowledged, and organized medicine in America must give it approval and active support.

To encourage the regular medical profession in anything which it may do, there are the efforts and plans already inaugurated by government officials and social and medical leaders. Divine, Commons, Rodman, Welch, Cabot, Dock, have all been important factors. *Modern Medicine*, as a medical journal, and *The Survey*, the leading social periodical in America, devote much of their pages and editorials to social medicine. Surgeon-General Blue is planning a nation-wide propaganda for health conservation. The federal government has already made appropriations for and is conducting statewide surveys on child welfare, tuberculosis, feeble-mindedness and social disease. Leading health workers are urging the passage of a concurrent resolution providing for a congressional investigation of all federal health agencies, this looking forward to the establishment of a federal department of health. For years it has been recognized that uniform state and federal legislation is necessary to bring about improved health conditions. Eight states have appointed commissions to report on health insurance. Thirty-eight states had, up to 1913, passed industrial accident insurance laws.

The American Public Health Association, including many prominent physicians and educators, proposes (1) to aid in coordinating national and state organizations engaged in health matters; (2) to publish a magazine to interpret scientific knowledge in terms of popular understanding; (3) to conduct a campaign of popular health education to help every citizen in the community.

The medical profession, as individuals, is giving its support and approval to much in social and industrial medicine and as stated are actively engaged in it in many instances. But this transition to social medicine is being made so rapidly that it behooves us to give specific consideration to it and assist directly in its de-

6. *Modern Medicine* (Aug.) 1919.



velopment. Organized as the Missouri profession is, this body should originate legislation looking toward the comprehensive direction of all sanitary work, and the detection and prevention of infectious and epidemic diseases of the whole state. The cause and prevention of industrial accidents and disease should interest us quite as much as it does the employer and employee. As a profession, with a sufficient number of well trained and qualified internists and surgeons, we should assist in establishing in every county in the state, hospitals and clinics, with adequate equipment to give service to every man, woman and child needing medical or surgical care. Poverty is neither sinful, illegal nor antisocial. It is the product of illness or accident, and the sufferer from its tentacles can usually be restored to self-respect and self-support if given humane consideration and treatment.

The segregating in proper institutions, with scientific care and training, of all the feeble-minded and insane would be a blessing to those afflicted and a relief to society in general. Toward this desideratum we should give much more serious thought than we do. It is a great reflection on both our state government and the profession that the conditions so graphically portrayed by Dickens as existing in England 100 years ago are present today in our own state of Missouri. Feeble-mindedness, illegitimacy and their resulting social problems would disappear were this question properly handled.

Group medicine in our hospitals and dispensaries must be brought about and this solely for the purpose of increased efficiency in diagnosis and treatment, and the giving of medical service to a greater number. Instead of relegating the poor sick to indifferently conducted general clinics and hospitals, our private hospitals must be prepared to do all the free work which may appeal to them. Hospital standards must be raised and only grade A institutions be permitted to exist. The approval of the regular medical profession should be back of every license or contract issued by the state to any medical institution.

All big work today is social. It is along broad lines, and for human betterment. The individual either as doctor or patient is not the important factor. General sanitation, public health, medical service for the masses, should interest every physician and every citizen. As every physician and citizen lose themselves in their work—as did Pasteur, Reed, Carell, Trudeau, and, as today, are Flexner and Noguchi—then can we feel that the medical profession justifies the oath of Hippocrates, which we all subscribed to when we took our first step on the long road of medical practice. Let us give up individualism, and exercise fully our God given capacities in service to society.

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#### DISCUSSION

DR. C. LESTER HALL, Kansas City: The thoughts expressed by Dr. Child take us into a realm of thought and speculation that is beyond any cavil or doubt as to its usefulness. I feel that the Association owes Dr. Child a vote of thanks, and Dr. Hamel as well, for this splendid presentation. He takes us beyond the ordinary things of life and practice. I feel that more attention must be paid to these questions so well presented, that we must rise above ourselves as individuals and as a profession in order to accomplish this wonderful work which is within reach.

DR. R. L. RUSSELL, Jefferson City: The government is spending more than four million dollars in the United States for the control of what Dr. Child calls the "social diseases." He mentions in his paper that they are the diseases that are filling our insane asylums, causing morons, the rejection of more men for military service than any other one disease. His paper is the most modern possibly that has been read during the session, and yet he goes back 100 years and says "social disease" when we are bending every effort in our power to make these diseases a household word and bring them into the open. If by "social diseases" we mean syphilis, gonorrhea, or chancre, why not tag them as such and bring out in such papers as Dr. Child's the real things he means by "social disease." These diseases cause more than 50 per cent. of the death rate in the new-born. They cause more deaths every year in this country than were caused during the great war with Germany. In Camp Lewis 70 per cent. of men who had had gonorrhea, whether recent or chronic, on examination of the fluid from the prostate gland or seminal vesicles showed the gonococcus. Every one of these men was able to infect the innocent wife whom he had married. Very few hospitals will admit a case of venereal disease as such, but the state of Pennsylvania requires the hospitals to admit these cases. By proper public health measures these diseases are preventable; but why not call them by their right name?

DR. S. P. CHILD, closing: The important part that education must play in connection with social medicine has been emphasized by Drs. Russell and Hamel. To answer Dr. Russell's question, my feeling is that he is working in a specific department with educational propaganda, while my paper comprehends more than the simple question of the social diseases, gonorrhea and syphilis. I support his contention in the specific work which he is doing.

On the point of education, it is not a question of the parents' responsibility. It is a question of the state's responsibility in training these children, not only when they enter puberty, but when later they enter adolescence, that they may be prepared for the conditions which surround them, and may influence them either beneficially or detrimentally.

Twenty-five years ago there was given in Philadelphia, at the College of Physicians and Surgeons, a symposium by men from New York and Philadelphia, on the means of preventing and curing tuberculosis as it existed in those two cities. We have not advanced in Missouri as far as they were twenty-five years ago in the recognition and control of tuberculosis. Twenty years ago we were better organized as a medical profession than we are today. There was greater cooperation and greater coordination of our forces then. Such we must resume and reestablish. Social medicine is being established for us by the state, by our educational institutions and industries, and what part are we taking in it? After twenty years there is improvement in the kind of papers and the men who come to the Association to present papers, yet I feel that we too often come here to present special medicine. The fact is that in the cities we are all doing special medicine. In many of the country hospitals and the smaller places we find just as good medicine being practiced as in the larger

cities. But we are becoming more or less detached. We are not cooperating upon this proposition of social medicine. I hope I have made my point, that throughout the centuries up to fifty years ago we were doing social medicine. We have been specializing for fifty years. My contention is that we must forget specialization and individualism and contribute more toward social medicine.

### ARTIFICIAL ANUS\*

W. T. COUGHLIN, M.D.  
ST. LOUIS

At some time in his career and usually quite early almost every general surgeon is called on to perform the operation of colostomy for the purpose of diverting the entire fecal stream from its natural route of exit. Such an operation is one for which usually the surgeon has little enthusiasm, and ordinarily it is one to which the patient, with foreknowledge of its consequence, gives consent only when life has become a burden.

The reasons for this aversion to such an operation, on the part of both parties, have been in the main our inherent dislike to having any part of our body surface come into contact with fecal filth, and the fact that by this operation such contamination is believed to be made constant, obligatory and uncontrollable. Furthermore, there is in each of us an inherited or acquired instinct which drives each to withdraw himself from the society of others for the act of evacuation of the bowel. When, therefore, we contemplate an operation following which the evacuation can no longer be foretold, nor controlled, the victim himself and those in his immediate society find themselves forced to regard such an operation with loathing and disgust.

It is because I have experienced many of the disappointments that come to those who are called on to perform this operation that I have selected this rather avoided topic, in the hope that others may come to regard the operation with at least a little less repugnance than formerly and that their patients may perhaps have a bad condition rendered a little more tolerable.

The amount of relief experienced by the patient will depend largely on the amount expected, and the amount to be expected will vary with the indication for the operation. The eagerness or hesitation with which a patient elects to have the operation performed varies as to the temporary or permanent duration of the abnormal anus.

Except when performed as a life-saving measure for the relief of acute obstruction, the choice is to be left to the patient.

Before operation is decided on, all the unpleasant sequelae should, as far as possible, be made known to the patient; also he should be advised as far as possible as to whether the condition is to be permanent or temporary. If permanent, what will be his ultimate gain or compensation as weighed against his present discomfort or danger. If temporary, what advantage is immediately or remotely to be expected and what additional operative measures are contemplated before final restoration of the bowel to its natural bed.

There is considerable divergence of opinion among surgeons in regard to the indications for the performance of temporary colostomy; and the prevalent idea among general practitioners is like that among the laity, viz., that there is no such operation; that a colostomy once performed lasts until death, which usually comes quite soon, and that the only indication for colostomy is the presence of irremovable malignant obstruction in the rectum.

In my opinion, temporary artificial anus has often a place in the therapy, whether medical or surgical, of disease in the colon or rectum. I can imagine no better treatment for an ulcerative colitis than the rest afforded by a low ileostomy aided by the direct application of medicament or lavage to the bowel through the efferent limb of the loop (or through an accompanying appendicostomy if the surgeon prefers). Tuberculous ulceration of the rectum is a condition which treated without colostomy is prone to resist and endure but after a colostomy is performed either the radical or expectant method will more often be followed by success.

Syphilitic stricture with ulceration, especially the long cylindrical strictures, I have known to be treated for years and grow progressively worse, but yield to dilatation and medication after a colostomy was done. Furthermore, such a stricture may be either cured by a plastic operation or have the strictured part removed and the stream restored to the normal channel afterward.

There are certain malignant growths in the rectum which involve either the rectosigmoid or the junction of the rectum with the anal canal. Taken early, or even as soon as first discovered, they are removable in most instances with at least a 50 per cent. chance of permanent cure if a colostomy is first done at some distance above and the operation performed in such a manner as to permit restoration of the continuity of the channel afterward.

A permanent artificial anus may be made with hope of giving permanent cure to cancer of the rectum; this is a well recognized part of one of the procedures in dealing with cancer of the rectum at the present day. Or a permanent artificial anus may be made without giving any hope of cure in cancer below. It has been often said that the cancer growth is slowed down or

\* Read at the Sixty-Third Annual Meeting of the Missouri Medical Association, Jefferson City, April 6-8, 1920.



much better after the artificial anus has been made. I have never yet seen it check or slow the growth of the cancer, but it does somewhat diminish but never, I think, entirely cure the desire to have a stool and the tenesmus which causes so much discomfort.

The operation having been decided on there remains the choice of method and the segment of bowel to be opened.

It should not be forgotten that the farther from the anus the more fluid the feces and the more frequent the motions. It is to be remembered also that certain parts of the bowel are unprovided with a mesocolon and that the more pull on the mesocolon the more likely will retraction occur afterward. An opening low in the abdominal wall is more likely to be followed by hernia of the artificial anus. A certain amount of protection against hernia can be obtained by drawing out the loop "en zigzag," or by muscle splitting, or "gridiron incision," but no method entirely guarantees against its occurrence. I have a case in which there is a small hernia alongside the loop as it comes out through the rectus above the umbilicus—the right half of the transverse colon being used in that case; and I have had one when the sigmoid came out through a small gridiron incision.

The more fluid the feces the more trouble one has with excoriation of the skin. In ileostomy and cecostomy I have always had skin excoriation. It is not constantly present after the first few weeks but after that it recurs from time to time accompanying spells of increased fluidity and frequency of motion. I have now an elderly woman who has needed the ministrations of two nurses constantly for four weeks, their chief occupation being to change the dressing and keep the abdominal skin protected. In spite of all our efforts she was most uncomfortable because of excoriation. She has a caecostomy.

The site of election is the sigmoid but if one should later want the sigmoid to pull down to take the place of an excised portion it must not be used; when the sigmoid is used it often happens that the bowel moves only once daily and causes very little inconvenience. I once showed a patient at the St. Louis Medical Society on whom I had done sigmoidostomy for tuberculosis of the anal canal. I restored her bowel to its normal bed but she consented to have it done only because she was anticipating remarriage. Through some mischance her anticipations were not realized and she still maintains that had she known in time she would never have had that last operation done. This only to show that the condition is not intolerable. I have in charge at present a very happy little woman who, after six years of treatment for stricture, had a left transverse colostomy done last August or September. She refuses to have any more "rectal dilatation," saying

she has no more use or need for the rectum anyhow as she never intends to have the bowel returned to its normal place.

However, it is quite true that the prospect of a permanent colostomy is not one to increase the general brightness of life but rather to lessen the load of pain and suffering, and I think it is not to be hurriedly advised. When advised as a palliative measure only the day of its performance should be deferred until the patient will be conscious of some benefit therefrom. As long as there is no increase of pain during stool, nor no interference with the passage, do not operate.

In doing the sigmoidostomy it is customary to make an incision in the abdomen anywhere from the level of the midpoupart point to the level of the umbilicus and anywhere from the middle of the rectus out to the lateral limit of the abdominal cavity. The finger is usually inserted through a small incision and a loop of bowel fished up and brought out. Should the desired loop be not brought up the first time the fishing process is continued until the operator is successful. The peritoneum is now closed around the stalk of the loop and the loop anchored in some way. After a day or so the intestine is opened and after a week or two the protruding loop is cut off.

Now there are many objections to, and dangers accompanying this method and also many disappointments afterward.

First, if one make a small incision, there is the difficulty of finding the bowel. Pennington and others cite cases in which the sigmoid could not be found inasmuch as it lay on the opposite side. In addition, the transverse colon is not always provided with omentum and has been mistaken for the sigmoid. Again, the sigmoid has been found to be devoid of mesentery and therefore impossible to draw out. If, on the other hand, a large incision is made and the bowel drawn out through it, a hernia is much more likely to develop later. Therefore, it seems to me much better to make two incisions, one for exploration and identification of parts and for the selection of the loop to be drawn out, and for the purpose of closing the passage between the drawn out sigmoid loop and the left posterolateral wall for the prevention of hernia intra-abdominalis; and a second incision only just large enough to permit the withdrawal of the loop.

Paul, in 1891, wrote: "The only marked source of failure has been the difficulty in completely cutting off the fecal stream per rectum." The first colostomy I ever did was followed by retraction and recurrence of stool per rectum, and I have had three patients since (whose colostomies had been performed by colleagues) in whom a like condition prevailed.

Madelung, in order to forever prevent such a disappointing sequel, advised cutting the bowel

in two, inverting the distal end and returning it to the abdomen. If this is done as intended no stool will pass per rectum. But it is dangerous advice. The cutting in two of the bowel of itself is not a dangerous procedure, although it does increase the risk of peritonitis and in the hands of the inexperienced it may be very dangerous. But one can not always tell which is the distal or efferent loop. Allingham condemned the method because in seven out of fifty cases he found the loop twisted and feces flowed from what he had considered the lower end. Ladow cites a case and illustrates the condition found postmortem. The whole loop was so twisted (congenital) that the high limb was really the efferent one. Only disaster could follow the closure of the supposed efferent loop in such a case.

Following the author's technic there is absolutely no need for cutting the bowel in two as a routine practice. But if it should seem desirable to do so, the two incisions in the abdominal wall permit of close examination of the loop and the afferent loop is not likely to be closed by mistake.

So far I have said nothing about the establishing of voluntary muscular control over the artificial anus. A great deal has been said about, and many modifications of the operation have been devised to secure, voluntary muscular control over the abnormal anus.

At Chicago, in 1913, a surgeon was telling the visitors at the clinical congress about his new successful method. He then brought in the patient and ordered the dressings removed in order to convince us of the ability of the patient to foretell and prevent at will the passage of the stool. But to our amusement and his chagrin we saw a large stool on the abdomen. We were not convinced of the success of his method.

Now, I have tried the drawing out of the intestine "en zigzag" through muscles, and around muscle border, and under the anterior sheath of the rectus, and under the skin after cutting the loop, and returning the efferent limb, and I have also used the method of twisting the loop, but so far no patient of mine by any method has been able to prevent the passage of stool by muscular contraction.

It is true that in patients in whom the intestine is brought through a narrow or tight opening in the muscles, or in whom the intestine is made to travel in the abdominal wall "en zigzag" for some distance before appearing on the surface, there is a foreknowledge of the coming of the stool. The sensation is transmitted by the pressure fibers in the abdominal wall; but there is no ability to check the passage.

The normal bowel mucosa is insensitive to the passage of bowel content. It is only when the mucosa of the upper end of the anal canal

is pressed on or irritated that one becomes conscious of the presence of feces in the rectum. No one can tell at any time when feces are traveling along any special segment of his digestive tract. It is too late to control the movement when the information reaches the patient that the movement is in progress or has occurred. Most of the patients know nothing of it until the motion has occurred. Therefore, all talk about voluntary muscular control is vain.

Many patients are told that a cup or receptacle can be secured to prevent soiling the clothing and obviate the need for frequent attention to the artificial anus. There are many varieties on sale. None work perfectly under all conditions. The most frequent cause of complaint is leakage and the next is discomfort. In patients with fat abdomens or in the very thin it is difficult to hold the receptacle in position. This difficulty is increased if the patient is active or has to do work involving body movement. In using the method here advised this difficulty is entirely overcome as the protruding loop affords a point of support for, and is entirely covered over by, the receptacle.

After operation death sometimes occurs. I have lost three patients from peritonitis. In one some coils of small bowel had slipped between the loop of the sigmoid drawn out and the left lateral wall. In one the bowel had been cut in two below and a loop drawn out. The peritonitis had originated from the closed end of the loop. In the other it was impossible to say which occurred first, the obstruction or the peritonitis. No postmortem was obtained. I have had two patients die suddenly, one on the fourteenth and one on the seventeenth day. One was undoubtedly pulmonary embolism, the other was probably cardiac failure. Both were fleshy and no postmortem was obtained in either.

Ileus is often seen. When it rights itself we call it paralytic and let it go at that. We never see the pathology. I had one case in which it lasted eight days and was unexpectedly followed by recovery long after fecal vomiting had set in. I believe that ileus in which fecal vomiting occurs is never an "idiopathic" or a "paralytic" ileus. It may be that the withdrawn loop comes out through too narrow an opening and temporary ileus may be due to this, which I have overcome by passing a rectal tube at intervals into the afferent loop. I saw a case in which gangrene of the whole loop occurred and was followed by death, probably from peritonitis.

When the loop is soon cut off, or when the end is brought out and fastened to the skin, retraction and contraction occur until presently the orifice is too small. I have seen a patient in whom the end had been brought out around the margin of the rectus. The orifice was smaller



than the diameter of a lead pencil. Such condition was cured (and remains well after four years) by drawing out more of the bowel than we needed and fastening it so that about 2 inches of the end protruded beyond the level of the skin. The antimesenteric border was slit up for a little more than an inch. There exists a sort of knob of bowel covered by everted mucosa in the center of which is the orifice.

Some retraction of the loop is likely to occur but if enough bowel be drawn out and the mesentery split, a double figure of eight stitch, i. e., two stitches about  $\frac{1}{2}$  inch or  $\frac{3}{4}$  inch apart, can be made to approximate the muscle edges to each other through this opening and the ends of the stitches can be tied over tubing or gauze. I prefer this to skin flap or fascia strip because it allows more perfect closure and so less infection of the wound around the bowel.

If the colostomy is to be temporary a few stitches are taken through the peritoneal coats of the loops as they pass from posterior to anterior wall so that their lateral surfaces will be held together. The opening to the left of the loop inside the abdomen is closed by stitching the peritoneum of the mesosigmoid to posterior and lateral wall to prevent the small bowel from "straddling" the loop. The midline incision is now closed and sealed with collodion and cotton.

The bowel is opened some time after twenty-four hours. It has by this time become so swollen that it is often hard to identify its parts. In order to make this easy it is a good plan, used by many, to insert black threads at intervals along the central band over the summit of the loop when one has finished the operation. For the same reason it is advisable to cut away any redundant epiploic appendices. I prefer a longitudinal opening of about 2 inches in length over the summit of the loop and I make it with the actual cautery. The loop I never cut off unless and until I am about to close the artificial anus, and this is the only part of the procedure for which any originality is claimed.

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#### DISCUSSION

DR. S. B. HIBBARD, Kansas City: In chronic ulcerative colitis not amenable to treatment in any other way I think a colostomy is indicated from the fact that through examination such as the proctoscope you are not able to determine to what extent ulceration extends into the bowel, and it is safest to do a colostomy in the treatment of these cases.

Also in doing a colostomy or making an artificial anus for the treatment of stricture it is always wisest to examine the patient carefully by a bismuth injection and fluoroscope examination of the whole intestinal tract to be sure you have not one or more strictures; for instance one at the rectosigmoidal juncture and another stricture six inches above. Thus you avoid doing your colostomy without knowing about the second stricture.

A number of different types of colostomy have been attempted, as Dr. Coughlin has said, such as the muscle splitting, bringing the intestine down and making a gluteal opening, etc. I can agree with Dr. Coughlin that none of these that I have seen are a success so far as controlling the bowels is concerned. I have a patient now who was operated three years ago for carcinoma of the rectum. She had an artificial opening at the sigmoid. She gets along very well by irrigating the bowel morning and evening, and is now able to keep her position as cigar girl. None of these things, however, are absolutely successful. She gets along very well until she eats something that gives her a little diarrhea, and then it is necessary for her to lay off work for two or three days.

One of the best methods of artificial control in the way of bags I have seen is the Brick bag. It is composed of an oval ring which fits against the abdominal wall with a light rubber bag attached. It does not take up any room and is very efficient.

DR. JOHN G. SHELDON, Kansas City: Two things are to be considered in this operation; one is the presence of infection, and the other is control. While perhaps there is no operation that has been done for a greater number of years than this, the controversy still rages as to the kind of operation we do. For eighteen years I have done one operation without changing. It is to make an incision as for appendicitis, only on the left side, make a flap of the skin, bring up the sigmoid and twist it so that the upper end of the bowel is outside and the lower end inside. The upper bowel contents come down into the trap of the sigmoid and pass out through a small opening made at one side, and a pad will control this better than anything else. This is well known and has been done for over twenty years, but the curious thing is that we hardly ever hear it mentioned. Ochsner has it in his textbook. It can be done without suture and with local anesthetic. The only suture is your skin flap. These patients cannot tell when the bowel will move, but they can work till noon and then till night without any leakage. To me it is more satisfactory than any other operation done.

DR. W. T. COUGHLIN, closing: I am glad the doctor mentioned overlooking of the pathology or of strictures when one goes to do this operation, because they are of very great importance.

If one makes an opening through the inguinal region by the muscle splitting method and makes but one he cannot make any exploration of the abdomen, and for that reason I strongly favor the two incisions. I am not claiming any originality for the two incisions. I do not know who it was who first advocated the use of two incisions, but I think it a very good idea. If but one incision is made it is not likely to be a small incision, and it is quite necessary, I think, that the bowel should be drawn out through a small incision.

I mentioned *voluntary* muscle control. Of course it is possible that a pad would make for a certain amount of control, but I think most patients wear some kind of receptacle. The receptacle the doctor referred to is very easily applied after doing the operation in the manner I advocate, namely, leaving the loop out and not cutting it off. One advantage is that it allows the receptacle to be placed where the patient wants it and held there. One of my patients devised a receptacle of her own. She was unable to wear one she bought because she could not wear a corset over it, so she got a long, oval ice bag, just an ordinary rubber bag. At the top she arranged an elastic band and at each side she put on ears, to which she fastened a strap to go around her. It works very well.

I touched on the turning over of the flap of skin or muscle and passing it through the mesentery to prevent retraction. If a loop of the bowel is brought out and left out there will not be any retraction worth noticing. That operation gives me more satisfaction

than any other operation that I have seen or that I have had any experience with in doing a colostomy—leaving a loop until we want to cut it off for the purpose of restoring the bowel to its normal habitat. It is very unpleasant to have feces coming out of the rectum or for the patient to have a stool by the normal route once in a while when you have done an operation to prevent that very thing. If a loop is left out no stool gets into the efferent loop.

Dr. Young has just now called my attention to the fact that I did have patients who had control. Dr. Young used to work with me and he remembers that they were not bothered at all. It is my opinion that they do NOT have VOLUNTARY muscle control. I will believe that they do when I can actually see a patient who can prevent the stool from passing. These patients do not have a stool every few minutes or every hour. They often have a stool regularly every morning and that is all there is to it, unless there is diarrhea or something like that.

### THE SINGLE LIGHT-STROKE PERCUSSION METHOD

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Percussion is one of the neglected arts. Strange as it may seem, the large majority of physicians have little or no confidence in the accuracy of their percussion. Consequently, this valuable diagnostic procedure is generally employed in an undependable and perfunctory manner. It is a common observation that the average physician makes the freest use of his stethoscope and seems oblivious of the fact that percussion is one of the methods employed in physical examination. While most physicians will contend for the correctness of their auscultatory findings, it is rare to find one who, when challenged as to his percussion findings, will not immediately lay down his lance. Fishberg states that percussion has been neglected by many because it has not given them the information they sought and has at times even misinformed them. While Lawrason Brown and others maintain that percussion is not sufficiently delicate to disclose the lesions of incipient pulmonary tuberculosis, Kroenig, Goldscheider, and many others, state that if we are to detect incipient lesions in phthisis we must resort to percussion. This variance of opinion on a matter of such diagnostic importance at once establishes the principle that, if percussion is to be of any value in the discovery of incipient tuberculosis, the technic must be well-nigh faultless and as free as possible from all elements which tend to interfere with the exact interpretation of the manifestations of physical phenomena.

If the method which I shall subsequently describe were more universally employed, percussion would gain in scientific accuracy and ease and would add much to the examiner's armamentarium. In this part of the physical exami-

nation most men go through the routine of percussion by striking from two to half a dozen times over a given area and then pass to other areas, and so continue in an inattentive and not infrequently listless manner. Often the percussion-stroke varies in power and rapidity. Complete concentration is absent. Consequently, findings obtained will be more or less inaccurate, unreliable and unsatisfactory. Only very pronounced pathologic changes, or very apparent differences in the density of the parts, can be determined with any degree of certainty.

In former days auscultation was performed by the direct application of the ear to the thorax. But information obtained in this way was of a more or less indefinite nature. Later, various instruments for auscultatory precision were devised. There are those of the old school who even today continue with the direct method, but on the whole, it has become almost obsolete. Formerly, instruments with large sounding-chambers were more in vogue, but now clinicians prefer the small sounding-chamber and are thereby able to examine more minute fields. But this more intensive method requires considerable mental concentration. Since the advent of the stethoscope practitioners and students have learned to auscultate with accuracy and skill and have become able to interpret sounds so well that they have neglected the other methods of physical diagnosis in the routine examination of the chest. If the same care and intelligence were employed in percussion the procedure would undoubtedly become as useful and as popular as auscultation.

The percussion-tone is dependent on sound vibrations and its quality and pitch are influenced by the nature and consistency of the anatomic parts and by the manner in which the percussion procedure is employed. When an orchestra leader strikes the piano to obtain the proper pitch for his men he touches the keyboard but once and his men listen carefully to catch the proper tone and pitch. He never strikes three or four times in rapid succession, for each sound would modify the succeeding one and the ultimate quality desired could not be accurately and easily ascertained. The same is true in obtaining a sound with the tuning-fork. It is struck but once and all the faculties are concentrated on the sound produced. If this single-stroke method were employed in the percussion of the chest it could become relatively as accurate. All the important qualities of sound involved in the acoustics of physical diagnosis—namely, intensity, duration, quality, and pitch—are influenced by the sound producing method. One carefully studied stroke gives the nearest possible approach to a correct impression of these qualities. Each additional repetition of the impact of the plexor on the sounding chamber adds another cause for a confusion of sound impressions.



The single-stroke percussion method compels a greater concentration of the attention and more intensive precision. The patient's chest is of course stripped of clothing and he is permitted to lie, sit or stand, as the examiner prefers. Absolute silence is naturally essential. While the fingers are to be preferred as plexor and pleximeter, the examiner may employ the hammer as the plexor if he has become accustomed to its use. A light stroke is by far the most desirable and makes it possible to outline the heart, substernal dullness, and small pathologic areas with considerable accuracy. It is best to snugly place the finger in the intercostal spaces and strike lightly with free wrist motion over the given area. The percussion stroke should be made but once and the examiner should listen attentively to the sound produced. Thereupon, he strikes another area for a comparison of sounds. If the lungs are being examined, sounds from opposite sides should be compared, using but one light stroke over each region. Of course the examiner may if desired percuss over the same spot more than once to satisfy himself as to the quality of the sound he has obtained.

In percussing the heart the same single light-stroke method should be employed, commencing at some distance from the viscus and outlining it with a skin-pencil.

After continued use of this method it is sometimes difficult to determine whether one is interpreting findings by the sense of touch or by the sense of hearing. It is just as easy to use the single light-stroke percussion method as any other method and it is reasonably certain that its more universal employment will make it a much more satisfactory, reliable and popular diagnostic procedure. It appears to be an excellent method for the instruction of students who lack grounding in percussion technic more perhaps than in any other practical branch of physical diagnosis.

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#### PRACTICAL THERAPEUTICS IN DERMATOLOGY\*

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A paper devoted almost entirely to therapeutics in any branch of medicine is apt to be something of a novelty. Such a paper in the realm of dermatology should be nothing short of a sensation, regardless of whether the subject matter is meaty, or simply of a tea-and-toast variety.

A week ago I heard an embryonic dermat-

ologist give voice for the millionth time to the ancient bromism, "Get your diagnosis and you can dig up the treatment from any old textbook."

In dermatology most especially, of all branches of medicine, this attitude of mind seems to be the general fashion. One cannot help but be impressed by it in lecture hall, clinic and society meeting.

Of course the mere fact that the offending pathologic lesion is spread out before the eye for all to see is in itself a stimulus to accurate and quick diagnosis. Personal and professional pride and standing are at stake in this matter for the dermatologist. He must not be confused nor confounded; he has no chance to hedge; his opinion must be unequivocal and immediate. On the other hand, the internist is allowed as much time as he requires to work up a case.

This necessity for rapid, snap diagnosis, is undoubtedly one of the reasons why treatment is usually slighted. Interest seems to wane after the diagnosis has been made.

In magazine articles on skin diseases, consider the minute paragraph just before the summary or conclusion devoted to treatment; how little there usually is. On the other hand, take Stelwagon and wade through the mass of material offered on the same subject. Here is a veritable storehouse from which to choose; but the very plethora of it confounds us.

To the specialist of many years experience, old and tried methods at once suggest themselves; but the beginner or the general practitioner finds himself at a loss as to where to make a start. Such has been my personal experience; and in this paper I merely intend to set down some of the simplest and most practical therapeutic procedures which I have been able to glean from various sources.

It is always very gratifying when a case presents itself to realize that one has a dependable method of treatment at hand; a friendly old method of tried and proven virtue.

I have no doubt that some one some day will get out a volume with all physical ailments listed alphabetically; and, following each one, a specific which shall prove infallible. Of course the medical millennium will then have arrived.

In the meanwhile, let us consider some of the obstacles that continually present themselves. A well known author says this in his textbook, concerning the most common of all skin diseases: "The local treatment of eczema embraces almost all the means which are used in treating inflammatory dermatoses; and in its entire scope, covers a large part of the local therapeutics of skin diseases."

Here, at the very start, we are plunged directly into a vast maze of uncertainty. The very quantity of the agent at hand is a handicap. In what other branch of medicine is there

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such room for speculation and doubt as to the best course to pursue?

Leaving the most important consideration, that of internal treatment, until last, let us cite some hypothetical cases and endeavor to apply our more or less routine, practical therapeutics.

So to begin at the top as it were: A case of infantile eczema of the scalp; of the crusted, pustular type. Diagnosis as plain as a pike staff. What to do? We begin with the following ointment:

℞ Red sulphid of mercury.....	gr. xv
Sublimated sulphur .....	℥ vi
Oil of Bergomot.....	gtts. xv
Vaselin .....	℥ iii

This is spread on very thin layers of cotton, and applied to the scalp morning and night. Every other day the affected area is thoroughly cleansed with olive or sweet oil. In the course of a few days suppuration ceases; the active process subsides, and the lesions becomes dry. The application is then made once daily. When only superficial scales remain, the following salve is used sparingly, with or without covering:

℞ Acid salicylic .....	gr. xv
Tr. benzoin .....	gtts. xl
Vaselin .....	℥ iss

Here we have a method which should be curative in 75 per cent. of cases of this type. There are several little refinements of detail which must not be overlooked. The ointment should be applied on cotton, never with cloth or gauze. This holds good of course wherever a salve is used. It is surprising how generally this detail is overlooked. The cotton should be pulled off the roll in as thin layers as will hold together, to avoid undue heating, and the salve spread on it evenly with a table knife. Instead of using bunglesome bandages, a snug helmet can be made from very thin cambric.

Scratching is most readily prevented by the old pillowslip method. A small slip is slit at one end and an opening made at the other, just large enough to allow the head to emerge. Several large safety pins are placed between the arms and body, and the arrangement is complete.

Unfortunately, the *internal* treatment of these cases, as of most skin conditions cannot be so simply and graphically presented. We are confronted by the vast and intricate problem of milk modification and infant feeding.

There are, however, three or four expedients of the simplest nature which may be tried, and in a goodly percentage of the cases with very gratifying results.

The greater number of these children are overfed. A reduction of the diet of from one-fourth to one-third the total amount alone may turn the trick. Often one-half grain of calomel administered in a single dose every other night

to babies of from 6 months to 1 year, acts almost as a specific. A small dose of one of the potassium salts, either in solution or as supplied in some of the baby foods on the market, is a valuable remedy. When the children are undernourished one of the simplest and best additions to the diet is one or two tablespoonfuls three times a day of a gruel made from whole rolled or crushed wheat which has been thoroughly cooked and mashed through a fine sieve.

One of the most intractable though apparently trivial conditions met with on the face is the deep vertical fissure which sometimes occurs in the center of the lower lip. I have known these fissures to persist for many months and to present an aspect very similar to that of a beginning epithelioma.

Ordinary applications are quite often without avail. The immobilization of the part with a narrow strip of adhesive plaster usually accomplishes a cure in a few days. The constant application of an ointment containing phenol, calamin, zinc oxid and cold cream under the plaster is a useful adjunct.

Turning to a manifestation of the same disease of much greater magnitude, let us consider what would be our first thought in the presence of a general, acute, erythematous eczema of a highly aggravated type.

Here, obviously, our local treatment would be of secondary importance. It is surprising, however, how many sufferers present themselves who have been endeavoring to alleviate their discomfort by coating themselves with vast quantities of salves and lotions.

The first step toward relief must be prompt and vigorous elimination. Nine times out of ten a saline has already been taken, and as often without result. A capsule containing 5 grains each of blue mass and compound extract of colocynth, with 1 grain of powdered ipecac, at night and repeated the second night after, will be far more effectual.

When there is pronounced digestive disturbance a rhubarb and soda mixture should be given. The usual formula employed is:

℞ Pulv. rhei .....	℥ i
Pulv. ipecac .....	gr. x
Sod. bicarbonate .....	℥ iv
Aq. menth. pip.....ad.	℥ iv

To this it is the custom to add an ounce of potassium acetate, to increase the alkalizing effects of the soda.

In other cases where digestion seems unimpaired, and especially in plethoric individuals of excess weight and high blood pressure, aconite seems to do a great deal of good. It is combined usually as follows:

℞ Potassium acetate .....	℥ i
Tr. Nux. vom.....	℥ iv
Tr. Aconite .....	℥ vi
F. Ex. Rumicis rad.....ad.	℥ iv



This would seem to be an excessive amount of aconite, but no disturbing symptoms have been observed with it used in this combination.

In addition to chloral, hyoscyamus and cannabis indica, used as general sedatives to allay itching, especially at night, a pill of atropin and pilocarpin seems in a great many instances to work wonders. Instead of experimenting with the rest I start with the atropin and pilocarpin pill,  $\frac{1}{100}$  of a grain of the former with  $\frac{1}{4}$  grain of the other, one pill being given at bedtime and a second, if necessary, an hour or so later.

It may be objected that these two drugs are directly opposed to one another in their physiologic action. The fact remains, however, that together they will accomplish what neither one will separately; and the unpleasant effects of both are offset in the combination.

Here, in brief, is our main mode of attack from a therapeutic standpoint. In every engagement, however, as in practical warfare, the conduct of the commissariat is of extreme importance. If the patient continues on regular rations, chances of success are greatly diminished. It is our custom, then, in all these cases to suspend ordinary feeding entirely and allow the patient to subsist for several days on four articles only: bread, butter, rice and water. Bread at least twenty-four hours old; butter in abundance; well boiled rice as much as desired, and at least 5 half-pints of water daily; with two of them hot, morning and night.

This particular rice diet has become our sheet-anchor in distressingly itchy, inflammatory conditions. Not only in eczema, but in the first stages of lichen planus, in acute psoriasis, and other ailments of the same character.

The term rice diet has been shamefully abused. A great many pseudo rice diets are in vogue. Many patients at once inform us that they have already been on a rice diet. Questioning will bring out the fact that they have quite regularly taken a dish of rice with each meal; or they have camouflaged it successfully with milk and much sugar; or had it fried, or in a pudding with numerous other ingredients. They have eaten all sorts of hot bread; and have thought it no harm to drink coffee and tea; and in the late lamented days, have been known to fortify themselves against starvation with a cocktail or two.

So, with each case, you hammer it in: "Bread, butter, rice and water; bread, butter, rice and water"; with probably a pinch of salt as a great concession.

Just here it might be well to say a word in reference to the use of arsenic in this connection. The drug is so universally employed in skin conditions that very often one sees patients with acute eczema to whom it has been given with disastrous results. Arsenic is an active stimulant to the skin and is distinctly contraindicated in acute, inflammatory dermatoses.

Arsenic to the point of saturation in some chronic condition does wonders; and the amount that can be tolerated is at times remarkable. I have seen  $\frac{1}{32}$  grain of arsenious acid administered eight times daily over periods of many weeks without giving rise to disagreeable symptoms. This in leprosy, some cases of chronic psoriasis, and the like.

It is claimed to be a specific for the small, flat verruca which appear in groups on the backs of the hands, etc.; here given as Fowler's solution, two to six drops three times daily after meals.

Personally, I prefer to use suprarenal extract in this condition. Sometime ago I heard it asserted that in this and other types of warts, the suprarenal principle in doses of  $\frac{1}{500}$  to  $\frac{1}{250}$  of a grain, was all that was required. A 2 grain tablet two or three times daily would seem a more rational dosage.

In the conjunctivitis so often present in eczema of the face, a drop or two of the 1:1,000 solution of adrenalin chlorid, either full strength or diluted one half with water and used three or four times a day, produces relief and a subsidence of the symptoms very promptly. The only other medicament which I have ever used in the eye in skin practice, is a solution of zinc sulphat. 2 grains to the ounce of water. It has never failed to be of benefit in the type of conjunctivitis referred to.

While we are on the subject of suprarenal extract, its prolonged use in the treatment of chronic, recurrent urticaria might be mentioned and the administration of from eight to fifteen drops of the adrenalin solution, every three or four hours in the acute attack. Also in erythema multiforme and the other angioneurotic dermatoses.

Let us consider next one of the most stubborn and frequent of the minor ailments with which the dermatologist, and even more often the general practitioner, has to deal. The old, sluggish, chronic leg ulcer of whatever origin, varicose, syphilitic, eczematous or what not.

From earliest student days one remembers this *bête noir* of the clinics. How these ulcers were scraped and curetted and cauterized and skin grafted, and strapped back and forth with innumerable strips of adhesive plaster. How the patient grew weary along with the doctors and drifted away, only to drift back again in a worse shape than before. Methods of treatment are legion. Only a month or two ago there appeared a new one which sounded most promising.

The chief requisite of any of these procedures is simplicity of technic, both for the physician and the patient; especially the latter. Very few of these people are able or willing to devote more than a few minutes daily toward getting well. Of course the well-to-do who would have the time and inclination do not as a rule fall victims to this particular malady.

When a case of this kind presents itself at the clinic where time is a great factor we strip the treatment of all unnecessary refinement of detail. Three articles are ordered: A calamin lotion, a salve of calamin and zinc oxid, and a rubber bandage. Also a small amount of phenol and sodium biborate. The patient is instructed to begin treatment that night after getting into bed. The lotion is first applied to all portions of the lower leg showing any inflammation. This is allowed to dry for ten or fifteen minutes, and a second coat put on. When this has dried a thin layer of cotton is spread with the ointment and applied to the ulcer itself. Then a clean white stocking is carefully drawn on. In the morning, things being at hand so that the patient will not have to get up, the salve is carefully wiped off with cotton and the lotion again plentifully sopped on. In a few minutes this has dried and the leg is ready for the bandage.

It is most important that the patient be carefully instructed as to its application. Nearly every case comes in with the history of having worn bandages or elastic supports of some sort. Ordinary cotton or linen bandages are difficult for the novice to put on, scarcely ever stay put, and are usually uncomfortable and more of a detriment than a benefit. Woven elastic stockings made to order are a delusion and a snare. It is almost impossible to have them made the proper size and shape to begin with, and as time goes on they lose whatever shape they had and bind where they should be loose, and are loose where support is most needed. They do not allow for the varying size of the leg from day to day; and as swelling subsides are not longer of support at all.

The rubber bandage is 3 inches wide and 2 to 3 yards long. It is very elastic, thin and light, and cool and soothing to the skin. With the patient in bed and the leg propped up, the bandaging is begun as near the tips of the toes as possible. From there up to just below the knee each successive turn covers the last for about two-thirds of its width. Enough tension is applied to make the whole thing fit smoothly and snugly. The last turn is secured by a safety pin. When the patient gets to his feet he appreciates immediately the comforting support. With the bandage correctly placed the usual discomfort—and sometimes severe pain—are conspicuous by their absence. Ordinary exercise under these conditions is a benefit rather than a detriment. The normal circulation of the blood is reestablished in the deeper vessels and the superficial ones at once begin to regain their tone.

The bandage is allowed to remain all day and is not taken off until the patient is again in bed. A bowl of warm water should be at hand with a half teaspoonful of the phenol and two of the soda to the pint, dissolved therein. The

bandage being removed, the leg is gently cleansed with this solution and dried quickly with a soft towel; then the salve and lotion are applied as before. The bandage is thoroughly washed in the solution, dried and hung up conveniently to air until morning. There are few sore legs which will not yield to this treatment if the details are painstakingly carried out.

In clinical work it has been the habit to apply this measure to all intractable leg conditions, regardless of variety. In this class of work, at the first visit, a bottle of the stock "mixed treatment" is also supplied. For the man in the country, more or less remote from the laboratory, this should be an excellent routine procedure, especially when the diagnosis is for the moment doubtful. The nonspecific cases show marked improvement from the tonic and eliminative properties of this elixir of regeneration.

There are a number of other instances in which the bandage will be of great service. It can be used nicely in ordinary vericosities of the lower leg which have not gone on to ulceration, and also most particularly in erythema nodosum. Which prompts me to observe, at the risk of becoming discursive, that while the patient is mastering the intricacies of bandaging, the attendant should be searching industriously for some neat little focus of infection which, somewhat like the modest violet, is blushing sepiotically and unseen somewhere about.

Sometimes it is of advantage in very foul, heavily granulated ulcers, to cauterize them well with phenol and dress for a day or two with acetanilid. There seems to be no better dressing for sluggish and painful erosions than this drug. It is antiseptic and analgesic and seems to stimulate healing wonderfully. It is best used pure in the form of small crystals or flakes rather than as a fine powder or mixed with other substances.

Another matter of detail is the composition of the calamin lotion. This preparation is universally used and familiar to everybody; yet I have never seen two formulae exactly alike. The one used in this instance contains:

R	Ac. carbolic .....	3 ss
	Calamine .....	3 i
	Zinc oxid .....	3 ii
	Glycerin .....	3 iii
	Liq. calcis .....	3 iv
	Aq. rosae .....	ad. 3 iv

Regarding the salve two practical suggestions come to mind. One is the routine inclusion of 5 grains of carbolic to the ounce in the preparation of all ointments. It is of distinct value in a great many instances and is sufficient to prevent any salve from becoming rancid. The other is the habit of using cold cream or rose ointment as a routine base. It answers every purpose admirably; one becomes accustomed to



its consistency, and can thus compound more readily; and finally, it has no little inherent efficacy no doubt due to the oil of almond which it contains.

In the compounding of prescriptions for ointments and lotions there seems to be a considerably greater latitude for error than in those of other types. In regard to the variety of formulae for the lotion of calamin and zinc it is of interest to note that the particular recipe given above when placed in the hands of different druggists gives almost as great a variety of finished products. I remember very vividly an exhibition of five bottles of this preparation elaborated by five different pharmacists, which used to stand on the desk in New York. It was a motley and variegated assemblage; no two looked exactly alike, and one had been gradually transformed into a substance resembling concrete. Salves vary to the same degree. It is, therefore, well to keep in close touch with one's chemist; to have as many prescriptions as possible made by the same man; and every so often to have the patients bring with them for inspection a sample of the particular preparation they may be using.

One needs, for instance, but a single experience with chemically impure resorcin to become intensely druggist-shy. A tinting of vivid green as of verdigris is highly decorative and very seemly on ancient bronze cathedral domes; but painfully otherwise when suddenly developed on a twentieth century head.

Fortunately, in the comparatively recent euresol we have a most comforting substitute. This substance, the mono-acetate of resorcin, is a liquid soluble in alcohol and water. There is in addition a form of it on the market in which the unpleasant odor has been disguised. Most satisfactory lotions can be made with it.

In the treatment of several purely local and quite common skin affections, some practical therapeutic measures suggest themselves.

About a year ago when the New York clinics were over-run with a hoard of scabies cases imported from Germany, quite a number of outbreaks occurred among people not usually found in scabies circles. In treating clinic cases it is all very well to pass out pound boxes of sulphur salve and let them go to it. Few cases of sulphur dermatitis develop, and the application of greasy messes of oil of cade, betanaphthol, tar, lard, sapo viridis, etc., is taken as a matter of course.

People with more esthetic tastes and thinner skins complain bitterly against such semi-barbarous methods. I have found great satisfaction in using a lotion somewhat like the following, which is by no means new:

R Hydrarg. bichlorid ..... gr. viii  
Alcohol ..... 3 iss  
Ammonium chlorid ..... 3 i  
Aq. rosae.....q. s. ad 3 xii

It is of especial value for those patients whose skins cannot possibly bear balsam of Peru, sulphur and other irritants.

Among the lesser blossoms which bloom on the skin is the modest ringworm, a hardy perennial which is always with us. The patient is usually acute enough to have already made the diagnosis; and may have gone further and applied the usual well known remedies. To paint with iodine and rub in white precipitate ointment with a toothbrush is an uninspired, unimaginative procedure. We have all used the roentgen ray and some other things.

A treatment recently evolved which is novel and original and in addition very efficient proceeds like this: The offending area is washed well with a saturated solution of bicarbonate of soda; this is dried off and ether is applied on a swab; tincture of iodine is painted on. Then the lesion is sprayed thoroughly with ethyl chlorid until china white. Of course the older and more infiltrated the process the longer is the spray applied. If very thoroughly done on recent lesions one treatment will be sufficient to effect a cure. The older ones, especially those on the scalp, may require three or four.

The third of this particular group are boils and carbuncles, which we will consider under one head. After having considerable experience with the method to be discussed, one is inclined to look askance at the hasty and universal use of the knife in these conditions. Of course in single boils, in robust individuals, incision is the accepted procedure and generally speaking, is not very dangerous. But in the graver cases of carbunculosis in old and debilitated patients, the custom of breaking down natural defenses and disseminating infection is sometimes very reprehensible. Dissecting out a mass of diseased tissue in toto and laying open previously occluded vessels and lymphatics, must on the face of it, be a dangerous undertaking.

The old time poultices are of course an abomination. Injections of phenol and other germicides if used early enough may abort the condition; but opportunity very seldom offers for such treatment.

In the New York Skin and Cancer Hospital it has long been the custom to use the following ointment on those cases which somehow escaped the surgeon:

R Ac. carbolic ..... gr. x  
F. Ext. ergot..... 3 i  
Pulv. amyli starch.....  
Zinc oxid .....aa 3 ss  
Ung. Aq. rosae.....ad 3 i

This is applied thickly on cotton, a number of times a day, depending on the amount of suppuration. The results obtained are very satisfactory.

External applications are really but the first step in the treatment of these conditions; and it has probably been an error to mention them in

this connection. In this paper far too little space has been devoted to systemic medication. In the case of boils and carbuncles, especially the latter, it is astounding to note how many are allowed to pursue their course without a vestige of supportive treatment.

I will pass over the use of vaccines, serums, leukocytic promoters, etc., all commonly used and extremely valuable, and merely mention two or three old-fashioned remedies whose use, alone or combined with the newer methods, seem to me to be extremely practical.

Let us consider briefly calcium sulphid. This preparation of late has fallen into disuse. It has repeatedly been said that it is more or less inert and without specific action. Personal experience has shown that it is of benefit if properly handled. A fresh preparation in the form of gelatin-coated pills is absolutely essential. And secondly, its administration must be pushed to the point of saturation. A quarter to a half grain every two hours for a day or two will more often than not ameliorate the symptoms.

Another drug, unofficial, seldom used and old-fashioned, is echinacea. It is said to improve appetite and digestion; to be antiseptic and alterative; and specifically antagonistic to organic infections of the blood, such as acute sepsis, pyemia, etc. In boils, carbuncles and abscesses it is of undoubted value, given in doses of from a half to a drachm and a half of the tincture every two or three hours. It will also do extremely well as a part of the treatment in the old, sluggish leg ulcers mentioned above.

There are a number of drugs of this kind which through neglect, apathy, or the restless tendency of the times toward the novel in therapeutics, have been pushed aside as of little or no value.

In determining on the subject matter for this paper the question arose as to what would best suit the proposed title. If we understood practical therapeutics in this connection to mean the mechanical things one does for a patient, we could readily call to mind a number of recent procedures of great interest and inestimable value. For instance, in lupus erythematosus the use of radium; of trichloroacetic acid, and of curettage. Radium in keloids and lymphangioma. The Kromayer light for acne and lupus. The roentgen-ray treatment for mycosis fungoides. The intravenous injection of foreign protein for various ailments, and the use of the very efficient Alpine sun lamp.

A special equipment of course is necessary for this kind of work and the usual practitioner could scarcely be expected to be greatly interested. It, therefore, seemed better to deal with the simpler treatments of the simpler ailments which after all make up the great mass of cases seen by general practitioner and specialist from day to day.

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## CASE REPORTS OF MERYCISM ASSOCIATED WITH APPENDICITIS

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CASE 1.—On March 14, 1913, Miss K. P. enters the hospital. She is 26 years old, unmarried, and a very attractive and intelligent young woman, who is doing some university work, but more society.

The family history is negative in its bearing on the present trouble. In her previous history there has been no illness of any consequence. Three years ago she had an attack of abdominal pain, which was diagnosed as appendicitis. Since that time she has had no marked attack, but is often conscious of pain and soreness in the cecal region. Long before the initial attack of appendicitis she has had a trouble with her stomach, in that shortly after eating and up to an hour afterwards she would have regurgitation of food. This would take place without warning and without nausea. The food was not sour or bitter. She would chew some and re-swallow it, at times would spit it out, if convenient. This trouble was often quite annoying when attending society functions. The trouble has become much more annoying during the last few months, as practically every meal is followed by regurgitation.

The physical examination shows a beautifully complexioned and physically well-developed young woman—a picture of good health. She has a slight excess of adipose tissue. Her heart, lungs, and kidneys are normal. Examination of the abdomen reveals some pain on pressure and muscular rigidity over the cecum. She is somewhat constipated. She has an occasional slight rise of temperature.

*Operation.*—The incision for entrance is around the right rectus muscle. The gallbladder, stomach, and pelvic organs, also the small intestines, found normal. The appendix was tucked up and imbedded under the cecum and had a complete meso-appendix, which was very much thickened. The base of the appendix was bound in closely with fibrous-like tissue and seemed to invert somewhat into the cecum. The ileum, ascending to the ileocecal opening, was bent sharply at a right angle. This terminal part of the ileum had a membranous covering, which was similar and continuous with the pericolic membrane covering the cecum and ascending colon as high as the hepatic flexure. The pericolic membrane was removed, greatly freeing the cecum and ileum and making them much more mobile. The appendix between the dense layers of the meso-appendix was amputated and inverted, as usual.

*Diagnosis (postoperative):* Chronic appendicitis, membranous pericolicitis, and a kink of the ileum.

*Postoperative report:* Her recovery was uneventful. The constipation was relieved. She had no further soreness and pain. Most gratifying was the disappearance of the food-regurgitation. Regurgitation happened only a few times and on rare occasions after operation. She was married about three years ago and is now in perfect health with no tendency to ruminate.

CASE 2.—On Oct. 24, 1914, Miss A. L. V. becomes our patient. She is a young woman, aged 20, whose vocation is doing society, and whose avocation is attending the university.

Her family history shows some tuberculosis on her maternal side. She has an uncle who is a merycole.

In her previous history she has had typhoid fever and scarlet fever in childhood. She suffers much from constipation, and at one time she had "locked bowels." For several years she has had eructations of her food shortly after eating and sometimes for an hour afterwards. The food returns suddenly without warning and without nausea, and it is not un-



pleasant, being neither sour nor bitter. It is annoying when it occurs in company, for it will sometimes suddenly fill her mouth, and she has to swallow several times to return it to the stomach. When not in company she often spits it out. At times she has had attacks of acute indigestion, with pain and nausea and, perhaps, vomiting of soured food, and this was an entirely different thing from the frequent regurgitations. She not infrequently had abdominal epigastric pain, but she never had to go to bed for it.

The present trouble began October 24 in the early morning with severe epigastric pain. Later the pain became more diffuse and lower in the abdomen. She had a slight rise in temperature. We see her later in the day and find a subnormal temperature, muscle rigidity of the abdomen, and marked tenderness over the appendix.

Operation was done on October 25, removing an inflamed appendix from under the cecum covered with membrane. The cecum and ascending colon also were covered with pericolic membrane. The cecum was mobilized by severing the cecoparietal membranous attachment. The membrane was stripped from the ascending colon.

Postoperative: The recovery was uneventful except she suffered much pain. There was no postoperative vomiting or rise in temperature. She was out in the usual time. She has been under observation until the last two years. The constipated habit was very much improved, the bowels being almost normal. Only on a few occasions has she had food eructations, which was shortly after the operation. Later the trouble ceased entirely.

CASE 3.—Miss M. L. F. is a young woman school teacher, aged 26, who comes July 12, 1919, for examination.

Her parents are dead, but she has no history of hereditary tendencies.

In her previous history we note that she had pneumonia and a continued fever in her childhood. All her functioning has been normal with no history of any marked digestive trouble.

The present trouble was first noticed about two years ago, when she began to have eructations of food shortly after eating. There was never nausea or pain, and the food was never sour or bitter. It was not particularly unpleasant, but was annoying. It happened more frequently after eating very heartily. She usually spat the food out when unobserved; otherwise she had to chew and swallow again. Since the beginning she has had intervals of only a few days when she did not ruminate. She has never been constipated. This condition has been better and worse during the two years, and more recently it has become much more annoying and a constant happening after every meal. She has been expectorating the food, and has lost 16 pounds in weight. She has had no other symptoms except a little soreness in the right inguinal region and never any acute pain. All her functions seem normal.

The physical examination of the chest is negative. She is still well nourished. She has been rather fleshy. The abdomen is normal except only a slight tenderness over the cecum from pressure.

Operation July 12, 1919, with a right rectus incision. The stomach, gallbladder, and small intestines are normal. The ovaries enlarged with small cysts. A fibrous nodule was removed from the ovary and one from the fundus uteri for examination. The appendix was completely covered over with a thick fibrous organized material, and had to be dissected out. It was curled on itself, long and of small diameter. The cecum was also covered at the end with this same thick material much heavier than the ordinary pericolic membrane. This material was all removed and the appendix amputated. A pocket or pouch was left from which this thick mass and appendix were re-

moved which was covered over by sliding and suturing the adjacent serous membranes.

This patient did well and left the hospital in ten days. Three weeks later I had to open the rectus sheath and let out some sanguinopurulent exudate. She has returned to her school teaching, and only on one occasion has she had her food regurgitate.

The recital of these three cases of appendicitis will be pardoned, I hope, because they present an accompanying trouble so peculiar and infrequent. Rumination in man has been observed for a long time, notwithstanding it is so unusual. Many interesting conjectures may be made as to its cause. Our atavistic tendencies may occasionally take us back to our prehistoric ancestors, who ate grass and chewed the cud, a long, long time before old Nebuchadnezzar was turned on pasture. Quite a number of cases of merycism are recorded, but we fancy these are the first on record which seem to be affiliated in some way with a damaged appendix or a Jackson's membrane. It may be an injustice to try further to indite the appendix, which has already so many counts against it. Possibly a true bill may be found against Jackson's membrane. We must admit that these cases show a peculiar coincidence. It is at least suggestive that the pathology had something to do with the merycism since all three cases were relieved of the trouble.

Case 3 could not have been diagnosed appendicitis or pericolitis on the symptoms and signs presenting, but she was operated on for the merycism because of the experience with the other two cases.

We should hardly be justified in concluding from so limited an experience that appendectomy is the proper treatment for merycism. We think it is a matter of interest to record these rather strange and unusual conditions, and to note the similarity in these cases, which may be only a coincidence.

These patients were all females, while it is stated that most merycoles have been males. The appendicitis was of the chronic type. There were no very acute attacks, and Case 3 had never had an acute attack. Constipation was not a marked symptom except in Case 2, notwithstanding the pericolic condition, and all of the patients enjoyed very good health. The regurgitation of food was really the most annoying and prominent symptom in all of them. Note also the similarity in the pathology. All of them had a pericolic membrane and a fibrous bound-down appendix.

We are, indeed, "fearfully and wonderfully made," and the most complex and wonderful part of our anatomy is our great sympathetic nervous system. Why pain and reflex disturbances distant from the pathologic point? Well, we will put it on the sympathetic system. It is most convenient. Perhaps our appendix vermiformis was a prehistoric grass-pouch and we

were herbivora. We believe it was not a stomach according to our comparative anatomists, for it was too far down the line. But, no doubt, it was, and is now, most sympathetically associated with our stomachs and the front end of our alimentary tract. Just why should we have our initial epigastric pain in acute appendicitis unless our great sympathetic sends the message up to the stomach, and it throws a pyloric spasm and pushes our stomach against the parietal walls, wherein are our sensory nerves. Right after that the message is sent all down the line and we have a general parietal pushing and general diffuse pain results, finally landing at the pathologic seat of trouble right over the appendix.

It is only through the association of the appendix and the stomach through the sympathetic nervous system that we can conjecture why the removal of the appendix and the freeing of the cecum could cause the disappearance of the merycism.

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#### FIVE YEARS' EXPERIENCE WITH STOCK VACCINES

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To the practitioner who has reached the deliberative stage of his professional existence, who through age or physical handicap of other nature has been obliged to retire from the therapeutic "firing line," vaccine therapy comes with a most decided appeal. Conversely, the busy surgeon or the bed-to-bed clinician with rushing tactics, may find little or no time to expend upon this most fascinating field of adventure.

May I say a word in argument for this method of treatment? While it is yet true that vaccine therapy is a "shot in the dark" in many instances, we must admit that for many years we have successfully combated smallpox with stock vaccine, and the same may be said (only with more emphasis) of typhoid fever. A stock vaccine should not be called so, in the sense of "ready-to-wear" garments, or placed alongside of the cure-all patent nostrum. They are of definite bacterial content; their dosage approaches decided accuracy, and I must say, that I regard the autogenous vaccine with more suspicion of a "shot in the dark" than I find in the well made stock product.

Nevertheless, with the advent of vaccine therapy, the autogenous variety sprang to the front of the stage and claimed the plaudits of our leading specialists, authors, and scientists

generally; and even the patients early suspected stock vaccines to be a makeshift and permitted their administration, if at all, with grave doubts. This might have been expected, for there is yet a widespread disposition to look favorably on the supernatural in medicine, to expect the pig-in-a-poke to be the fatter!

A large percentage of successes with stock vaccines, when intelligently used, furnishes the impulse of this paper. An experience covering perhaps 15,000 administrations has been in the main very gratifying to me, having brought about many astonishing results. I acknowledge many failures, but these I attribute to my own inefficiency rather than to the agencies used.

At the outset I followed the leaders and used autogenous vaccines whenever they could be obtained; and my memory is at this writing, that I have not a single success or favorable result to my credit. However, in two or three instances I witnessed a dangerous negative phase, the patient almost collapsing in my office. And it is barely possible that I condemn autogenous vaccines, because I do not understand them! It happened in New York, in 1916, that a well known lecturer told me that "a well-made stock vaccine is vastly superior to the average autogenous vaccine." This was entirely in harmony with my experience.

One of my first cases was a male patient, 56, with chronic cystitis and prostatitis, more than five years ago. An examination of the urine revealed the coli-B as the infecting organism. He had all the local and systemic treatment, irrigations, and urinary antiseptics, without much benefit, and with none of lasting effect. I gave him a coli-bacterin, and he made a clinical recovery.

Another case (I am quoting from memory) was a young farm laborer, who had had a severe attack of typhoid fever some six months before. Clinical recovery ideal except weakness. He could not exercise over a few minutes without being compelled to sit down and rest. I could find no organic lesion. Believing he was suffering from deranged metabolism due to typhoid intoxication, I gave three injections of typhobacterin. Under my care twelve days, he returned home able to do any kind of work. No other agency used except the vaccine.

A third case was a young housewife, aged 33, nullipara. History negative. Diagnosis, subacute inflammatory arthritis, extreme obstipation and loud mitral murmur. Had taken everything. Unable to change from dorsal decubitus; hands and feet swollen to twice the normal; painful. Appetite nil; elimination at a standstill. Had had teeth and tonsils looked after without appreciable benefit. Medicines apparently without effect.

I persuaded her to allow me to use vaccines,

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to which she at first strenuously objected. The husband told me that four capable physicians had pronounced her incurable.

I gave her four injections of a streptopneumo vaccine. The intervals being two to four days between doses. She walked up stairs to my office after walking several blocks for the last dose, with every symptom relieved except the heart lesion, which at this time gave her no distress. She went home from the Springs, and I have not heard from her since.

With even occasional results like these, I feel that I would not willingly abandon so promising an agency as the stock vaccine. I am aware that serum treatment is the Mecca of the charlatan. I have known of instances where fabulous fees were extorted from guillible patients, in return for the most amazing combinations of cupidity and ignorance, but that may be said of most kinds of popular or meritorious treatment.

McKenzie, 3d edition "Diseases of the Heart," page 289, says, "When the *real nature* of the trouble is appreciated in acute affections of the heart, it will be realized how powerless we are directly, to modify the diseased process. . . . In vaccine or serum therapy, there is a promise of a specific remedy, in each case, to meet the special organism causing the mischief." And while McKenzie at that time admitted that vaccine treatment had achieved little success, still this excellent authority on the pathological conditions affecting the heart, had a vision of rational treatment, which was almost prophetic in his treatise of six years ago. On page 293 of the same edition under the rather vague head of "Poisoned Heart," he mentioned the case of a lady whose heart disease resisted all the standard heart remedies for a number of years, when on discovery that she was suffering from a general coli-B infection, she was promptly cured by vaccines.

Before I left home for this meeting, I left off the vaccine treatment of two old ladies, aged 64 and 72, each with a chronic arthritis, and both improving. With our general knowledge that most arthritides are infected by streptococci, pneumococci, or the influenza bacillus—that our liver cases, or more specifically, our gallbladder infections, are often due to coli-B gaining entrance to the bloodstream through a diseased rectum—with this general knowledge I may say confidently, that we have as much reason to administer a stock vaccine, as to administer quinine in cases of supposed malaria, for in very many cases, perhaps the majority, a definite microscopical diagnosis is impracticable for the non-laboratory man.

The number of administrations, of course varies with the severity of the case, or more specifically upon the number of antibodies on hand or creatable in the patient. From three

to thirty doses has constituted the treatment required. A case of acne vulgaris required twelve doses at wide intervals. All other agencies had failed in the case.

Finally, stock vaccines have a definite bacterial content; they have produced no harmful or distressing reactions; they have in many instances produced satisfactory results, and I believe that we are yet on the threshold of this very interesting and very rational mode of treatment.

I place no credence in "pipe dreams" or exploited stuff which does not appeal to reason or common sense, but seem to benefit their promoters more than anybody else.

#### DISCUSSION

DR. HOMER L. KERR, Crane: I think it would be unwise to pass so important a matter as bacterial vaccines without discussing it. It seems to me it is one of the most important things that has been brought to our attention within the last several years. I have not been able to work myself up to the point of being enthusiastic about bacterial vaccines in acute febrile conditions, but I am a strong advocate of bacterial vaccines in chronic conditions, all conditions in which the system does not react sufficiently to cause a high temperature.

I would like to ask Dr. Gaines in closing to let us know if it is proper to give vaccines in acute febrile conditions.

Bacterial vaccines certainly do stimulate body cells. If you overstimulate cells you kill them. Body cells are already stimulated to the utmost in acute febrile conditions, and it seems to me that further stimulation by bacterial vaccines might be a harmful procedure. However, as a prophylactic and desensitizing agent I think there is nothing any better than bacterial vaccines. I think the day of pills and potions is fast passing. And I might also add here, although it does not pertain exactly to this subject, that the solution of pollens in desensitizing patients is fast coming to the front. If a man does not believe in vaccines I think it is because he has not tried them or given them a proper chance. You cannot make up your mind in a few cases, but if you use vaccines every day after a while you will come to the conclusion that they are very beneficial. We have some failures, of course, as Dr. Gaines says.

In arthritic infections, arthritis deformans, it has always been a failure with me, but I expect to keep at it. In subacute arthritis it is very successful. I would like to hear men who are really able to discuss the paper and discuss it scientifically.

DR. J. J. GAINES, closing: I have been told by expert bacteriologists that one vaccine is as good as another; that you could cure typhoid with colon vaccine as easily as with typhoid. This I do not believe and I have not tried it that way.

I cannot discuss the question of anaphylaxis. Vaccine treatment is the subject of my paper. I have been guided mostly by experience and I have drifted into the plan of using vaccines made by a reliable maker and sticking to them. I am acquainted with the chief of staff of their pathological department, and I am using their product confidently. During the influenza epidemic I vaccinated twenty-five or thirty people, none of whom took the disease. I am not telling you of the failures, but I have had plenty of them, especially where the infecting organism is walled off and you cannot get at it; for such cases surgery is the only remedy.

## CONSERVATISM \*

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"Medicine is a subject slowly evolving out of a past in which facts and fancies, faiths and beliefs, and even superstitions were strangely commingled. During the past few centuries it has been gradually shedding many of these beliefs and is daily becoming more exact in its methods, and basing its practice more on reason and less on faith. The subject however is so vast in extent and its aspects so numerous and varied, that it is difficult to comprehend all its bearings. . . . It behooves us to pause, from time to time, to consider what we are doing and whither we are tending."

So writes Sir James MacKenzie after a lifetime spent in communion with the Muse of Medicine. A tendency toward radicalism in any path of life should be curbed, otherwise it will lead to ultimate destruction. Conservatism, supported by modesty, care, thoroughness and a progressive spirit, offers the safest route to a desired object. Conservation as applied herein is intended to promote the preservation of these characteristics in the field of medicine. Before we can preserve we must plant, permit growth, and gather. To be assured of a perfect product, the soil in an indigenous climate must be well prepared, the plant carefully protected throughout its development, and the final act of preservation conducted by experienced and sympathetic hands.

It is intended in this brief paper to scratch the surface only—to suggest possibly a little more attention to cultivating the field and removing noxious weeds, and to advise a more sanitary handling of the finished product. To touch even briefly upon such a broad subject I may be permitted to wander over the field, suggesting chiefly by criticism though mindful of the fact that I hold myself equally responsible for our professional procrastination. Destructive criticism of others is usually fathered by jealousy, malice or ignorance. Constructive criticism of one's own self and society, intended only to remind us of the leaks in our own dwelling, should be accepted as it is intended, a stimulant to progressive development. Pardon then, the devious route by which this object is approached.

Recent eventful years have familiarized us with the full meaning of the term "conservation" as applied to our daily life. It has proved in a concrete form relevant to every phase of our existence, excepting taxation, and has been in effect kind and cruel in turn. A conservative policy need not be a miserly one; in fact it is seldom so. Adequate preparation for any

emergency, be it war, pestilence or famine, may demand extensive and seemingly profligate expenditures of men, energy and cash, and in the end prove to be conservative. During the stress of national need wholesale conservation met our unqualified approval. We had hoped that as a nation we should not soon forget the lesson taught by this brief but vivid experience. Yet when in the history of the world has extravagance been so universal and so-called conservation so ill-applied as at present? From a people of comparative calm and progressive affluence, in common with the other nations, we are passing through an epileptic seizure as violent as it is devastating, and we have but mentally to compare our "then" with our "now" to realize how complete is the demoralization, how serious the retrogression. It is not my intention to advance an argument on political economy, nor to suggest a method for the safe reduction of this universal dislocation. It will require a prolonged anesthetic and the patriotic attendance and skill of our wisest men and women to return the world's people to a state of mental, moral and physical tranquillity. Although doctors are wretched politicians we have a place in the work of readjustment at hand. Failure on our part in the present crisis to interest ourselves, not as professional men but as citizens, will be checked against us as selfish indolence. Doctors have a duty that is preeminently honorable and absolutely necessary to the viability of any nation—the preservation and improvement of the health of its people.

An illness that has its inception in financial derangement must be treated by trained financiers; the correction of errors in public stability demands the attention of trained statesmen, but the conservation of the health of a nation lies at the door of our profession and we must accept the responsibility for its maintenance and improvement even though we are forced to become politicians and statesmen to accomplish it. Now and then within the last ten years we have witnessed feeble spasms of unconcentrated effort to force our government to acknowledge the need of a health program in the appointment of a Cabinet member, or a representative in high circles, who can by virtue of his prominence demand a decent consideration of our physical welfare. The time is not far distant when such a hope must be realized. Our foreign relations, financial problems and commerce difficulties, are no more important than our health; hence, if the men who make our laws do not soon acknowledge it, the education of the people will bring about the realization that a sickly nation cannot successfully compete for superiority.

The realization of such a proposal within a very few years would solve our most difficult problem, but policies of state have as yet taken

\* Read at the meeting of the St. Louis Medical Society, May 11, 1920.



no cognizance of such a necessity. Financial, labor, commercial and political problems are considered the sinews that will make of us a great and strong people, and the health of the individual, which determines the health of the nation, is unfortunately deemed worthy of no more consideration than having its interests delegated to a subsidiary committee of proportionate power, whose feeble efforts to promote a constructive health program are brushed aside. The American Red Cross, thanks to the persistent, untiring efforts of a few unselfish, far-seeing patriots, is striving desperately to force the adoption of a wide-spread educational propaganda that will at the very least direct the attention of the common people to the importance and value of health conservation. The U. S. Public Health Service, blinded and bound though it may be by political control, is organizing for serious work, for within it are many interpid scientists who will surmount the handicap. The indications are many that the country is slowly realizing that so far as our national health is concerned we have been following a penny-wise, pound-foolish policy, have been permitting the most important asset we possess to be bartered and sold by ruthless politicians, and largely because of our own supineness and selfishness.

It is only the wise who in the presence of repeated disappointment will, in searching for the remedy, first examine themselves for the cause of their failure. During the process of readjustment which we are now undergoing it would be an act of wisdom for us as a profession, to "look within." Society has full right to demand of us the best we can give as health promoters, and our best cannot be given unless we can present an impenetrable front, a unanimous spirit and a comparatively healthy professional body with which to work. To reach this state it will be necessary to abandon a few long-cherished ideals. Empiricism, that inherited sedative to science, must be vanquished. Osteopathy, Chiropractics, Christian Science and kindred isms may possess, along with the bad, some commendable features. They can best be combated by a clean exposure of the good and bad elements which support them and by adapting to our own use as healers those qualities which have merit. Vituperation, scorn and belittlement will not open the eyes of their believers any more than violent destruction of a material god will Christianize a Buddhist. As a profession we are somewhat selfish and narrow-minded. This may be due to pecuniary causes. The necessity of providing for the national welfare of our oil stock promoters and incidentally for our families and ourselves, naturally forces us to a limited vision of the real intent of our duty as physicians. Were it not so we would assume a more generous demeanor toward our fellow-practitioner and

specialist. We would be less inclined to feel that each patient that comes under our care must necessarily have an ailment that fits our particular specialty. We would possibly be more inclined to have our diagnoses thoroughly worked out before applying our mechanical skill. The internist would not "pour oil on the troubled waters" until a necessary operation had been too long delayed, nor would the surgeon operate cases on snap diagnoses which later proved to belong to the internist. Before applying the drug or knife we would be reasonably sure that the flame we are trying to extinguish was not being fed by some concealed infective focus. We would socialize ourselves to the extent that the wage-earner and his family could be assured of the same careful and thorough treatment accorded the man who lives by the sweat of others. The millennium is not yet with us although we have long been extolled as a "noble" profession. Have we not all of us had reason, time and again, to question the justice of the appellation? One sometimes wonders if the main object is not financial aggrandizement and personal promotion instead of the simple duty of caring for the sick and afflicted. Is the development of our organization primarily for the scientific treatment of illness and injury or is it, as apparently believed by some, an honorable vehicle for individual preferment? Do we not in our organized societies sometimes harbor undeserving members of our profession, even afford protection to and place the stamp of approval on them? Are we as strong in condemning as we are in condoning the prostitution of our ideals? If not, why not, and wherein lies the fault? Until we prove, even at the price of public prestige, our determination to live up to the noble principles of the profession, both ethical and moral, and require as strict an observance of these principles by those within our walls as we ask of those who knock at the gate for admission, we are wearing an unearned title.

Impressionable lessons of the past are the landmarks by which we guide our future acts. During the period of our participation in the war, which is nominally of the past, a multitude of opportunities were afforded us to prove our mettle as a Medical Corps. As a body, the rank and file of the Medical Reserve served with distinction. The failures, which were few, occurred because of three things: First, the attempt to make a round peg fill a square hole, such as assigning a well-trained specialist to a station foreign to his work. Medical officers of a special training as surgeons or internists were placed in command of detachments which required their entire time supervising details that should have been delegated to sanitary officers, while expert surgical and medical work was attempted by officers of insufficient training. Second, the unfortunate neglect to take

full advantage of the many invaluable lessons in medical conservatism that had been gained by the Medical Corps of our allies. Third, petty jealousies and lack of hearty, unselfish co-operation between the officers of our corps here and abroad. Theoretically, the adopted plan was admirable and promised every success had the conflict continued for a longer time; practically, it fell short of our needs and the shortage was on many occasions severely felt. Only the superhuman efforts of the Medical Corps in the field, sustained to a great degree by the perseverance and pluck of the Medical Reserve who applied themselves to the work in hand like veterans, saved the face of our organization in the earlier days of our participation.

During the active and uncertain period from June to November 11, 1919, far more than airships and Browning guns, several thousand doctors divided into portable surgical teams to care for wounded men, were needed along the battle line. Those available did all within their power, but human effort is not without its limitation. A so-called conservative policy had decreed that several thousand of our physicians must first be taught the simple life of household duties, the drill of an infantryman and the professional polish of a specialist before entering the active areas. If the well-intentioned officers who directed this policy could have witnessed the rows of hundreds and hundreds of litters containing quiet, uncomplaining wounded heroes awaiting their turn because of the lack of medical attendants, they would have been loudest in condemnation of their own policy and would have moved their institution of learning within reach of the front where practical as well as theoretical training would be given and thereby made available for emergencies, the material at hand. The exigency and uncertainty of war changed a policy which, when instituted appeared highly conservative into one exceptionally radical and impracticable.

The war taught us many valuable lessons in conservatism. Picture, if you will, a field or advanced Evacuation Hospital during an attack, with hundreds of severely wounded awaiting attention or transportation. Upon the decision and judgment of the Triage Officer rests the fate or future welfare of the wounded. He must select the cases, first, for the shock ward; second, for immediate operation; third, for immediate transportation; fourth, to be held for observation or development; fifth, to be returned to the line. His policy must be one of conservatism although he may resort to very radical acts to accomplish it. And here we may qualify so-called radicalism. It is not radicalism to open widely a chest wall and suture a lung that is rapidly exsanguinating; nor to guillotine a bloodless, gas-infected limb; nor to explore at

once, even in crude surroundings, a perforated wound of the abdomen; nor to elevate the fragments and control the bleeding in a shell-riven skull; nor to spend all the time necessary in properly applying a splint that a limb may be saved and transportation robbed of its torture.

On the other hand, it is not conservatism to send to the shock ward a wounded man with incomplete hemostasis; nor radically to expose and eviscerate a lung for the removal of a foreign body in the absence of progressive hemorrhage, when closure of the sucking chest wound and the shock ward were the only indications; nor to crowd into trucks and ambulances for the purpose of rapid evacuation non-transportables, such as perforating abdominal wounds, sucking chest wounds, poorly-dressed and improperly splinted compound fractures. Such errors in judgment intended to be conservatism are radical in the extreme.

Conservatism in medicine and surgery demands the quickest possible return of the sick or injured to the nearest possible normal state of health. The means to this end may be simple or drastic, so long as they are scientifically applied and accomplish their object. The judgment, common sense and experience of the professional attendant must guide his selection of the method; and we are learning now to our chagrin but with genuine thankfulness how many times we have erred in this selection. There was a time not far in the past when we did not know that the patient whom we treated for months or operated with negative results, would have quickly recovered and have been possibly saved a neurotic future, had we radiographed the teeth. We were slow in believing that the correction of dietetic errors would frequently dissipate an autotoxemia that "remedies" had only aggravated, or that all abdominal ailments did not justify surgical meddling. We now recognize the value of a knowledge of internal secretions, the importance of searching out obscure infective foci, the futility and danger of ignoring the principles of right living, the evils of overwork, dissipation and self drugging. We flatter ourselves that we are conserving health by methods of today, while in truth we are often playing into the hands of fakers and healers by ignoring the simple laws of nature. Our education, however extensive, has been grossly neglected and our foresight has been sadly befogged by the confidence we have in our professional attainments and our ability to extinguish the fire when it kindles.

Fortunately, such apathy is not universal and is fast disappearing. Patrols, directed by interpid, self-abnegated commanders are continually in the No Man's Land of medicine and surgery and by their patient research and methodical investigation are sending up many a flash of light that promises in some future



generation to illumine the entire field of medicine.

It is not intended as an impertinence to question the sincerity of our endeavor as instructors in medicine, yet there are a few facts which give us the right to question the completeness of our system of instruction.

Faithfully to follow a conservative yet complete system of training, we must add to the equipment of our medical graduate. The wonderfully increased efficiency of our medical schools as brought about by higher standards in educational requirements, a more thorough preparation, the practical application of theoretical instruction in standardized hospitals, have all combined to place the graduate of today in an enviable light from the viewpoint of one who graduated twenty years ago. He completes his internship, sound in the fundamentals and in full knowledge of the fact that medicine is a progressive science, that theories of glittering promise may become antiquated over night, and that dogmatisms may be rudely forced into the discard by new-born truths. In short, he has been taught to think, to reason and to investigate for himself. Yet how often is his dream of success rudely shattered?

In looking about us we see the classmate from the top row, with a business education and with but a passing interest in medicine, forging to the front financially while the class leader makes a bare, but respectable living. We see the schoolmate of genial personality and limited talent selected for positions of trust and substantial returns, while the bookworm, always a delight to his teacher, struggles vainly for a foothold or drifts out of the profession. Wherein lies the fault? Largely in the individual, but is the course of instruction keeping on a par with medical progress? Does our responsibility to a medical scholar cease with the granting of a diploma? Are we omitting some vital spark in the moulding process? We teach the deaf and dumb to communicate, the blind to read and reason and to become useful citizens instead of public cares. We apply the principle of re-education to a maimed soldier and send him forth self-supporting. Mercantile establishments reach out and remedy inherent weaknesses in salesmanship. The entire industrial and commercial world is striving to better equip its revenue-producers, to meet the obligations of sharp competition, while we, possibly for want of a broader philanthropic view of educational principles, are neglecting the individual needs of our students and strengthening certain inherent weaknesses thereby going counter to what is vital to their ultimate success.

Medical conservation must begin in the schools. We can broaden our course of instruction and the better equip the graduate by exposing the pitfalls, social and financial, which

harass the new physician and impede his progress or alter his course.

Do we as teachers indelibly impress upon the student the fact that medical ethics is merely the principle of plain, simple honesty and fairness applied to our professional acts? Why do we not give the student the advantage of intensive instruction in industrial medicine and surgery so that he may intelligently care for the work that naturally falls early to his lot? Let us teach him that the ultimate object of medical science is the treatment of illness and injury, and primarily the art of preventing their occurrence and shortening the period of disability. We have most of us been standing contentedly by, waiting for a need for our services to arise, when our real duty has been calling to us to prevent the necessity of them. Let us give intensive instruction in preventive medicine and surgery, a field which will in some future day be given the important position it deserves.

We insist upon early membership in medical societies, and we have something real to offer each new recruit. But all too easily organized medicine may unintentionally drift into a corporation with too much preferred and too little common stock. We adopt a constitution and by-laws, appoint committees and pass motions with too little regard for their proper enforcement. We invite recent graduates to enter our portals, become one of us and enjoy the protection afforded by ethical medicine; and it has happened that in their first case these solemn principles are violated by a brother member. They come to us impressed with the criminality and unrighteousness of illegitimate medicine and surgery, and they not rarely find that in the minds of some of the members condoning is "within the law." We invite them to prescribe secret division of fees and they soon learn that, knowingly or unknowingly, the society harbors violators.

Are we doing our full duty toward recent graduates much less toward ourselves? Fortunately, the defects which have been mentioned are not without remedy. We should offer our new members the privilege of a right start in the best obtainable environment. They should come to us so clean of thought that they will be of great assistance in the cleansing process when a reformation is necessary. We have, if we are honest, one common aim, even though our method of accomplishing it may vary with our training and skill.

Conservation of our medical forces in the fight for promotion of the nation wide health program, is a vital necessity. We might just as well realize now that the science of preventive medicine and surgery is a lusty infant that is going to develop rapidly into a giant. With its development the quantity of our attempts to cure will rapidly diminish and the quality of our ministrations will markedly im-

prove. Industrial medicine and surgery will in the future be conducted, as much of it is today, by first-rate physicians at fair prices. The sanitary and hygienic surroundings of crowded districts will be greatly improved. The public in general will be taught the value of a knowledge of first aid. The rural districts will look with fear upon an abdominal pain and will call a physician instead of administering a purgative. The country doctor will charge a fair fee for his services and collect it himself. Group medicine in various forms, properly socialized, will predominate. Incompetent and unscrupulous physicians will not be allowed to undertake a service for which they are unfitted. Selfishness, envy and unfairness will have no rightful place in our professional relations, for exercising them will react directly against the interests of the one most vitally affected, the patient. There will be developed a standard of proficiency among specialists that will justify the distinction, and hospitals will not be permitted to serve the conscienceless doctor. This will be accomplished finally through a liberal education of the laity with the intelligent assistance of organized medicine which has already made unfathomable strides, and which will have recognized and uprooted its own shortcomings and have left them to perish in the fierce light of investigation.

611 Metropolitan Building.

#### THE CHOICE OF TREATMENT IN UTERINE FIBROIDS

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ST. LOUIS

Since days of yore efforts have been made to cure uterine fibroids by other than surgical means. Drugs, especially ergot, have had some repute, perhaps justly so, as benefiting this condition. Apostoli and his followers were very enthusiastic about the results obtained from electrolysis and galvano-cauterization. These procedures, for some reason, never became popular and have gradually fallen into disuse.

When it became known that neoplastic tissue is more vulnerable to the roentgen rays these were tried. However, in the days when we knew nothing of alpha, beta, and gamma rays, no progress was made, as an exposure long enough to affect the tumor would produce serious burns on the abdominal surface. When we began to filter out the soft rays, thus getting deep penetration from the hard rays while protecting the skin against burns, better results were obtained. We are especially indebted to Kroenig and his associates for perfecting the technic and thereby popularizing this method. For many years the roentgen ray has super-

seded the knife in the removal of fibroids at the Freiburg clinic.

While Kroenig used one massive dose, it was found that the reaction is in some patients quite severe. Therefore most operators divided the treatment into two or three doses, while Bécélère gives a series of radiations at intervals of one week.

Radium, as might have been expected, has been used in this condition for some years. Here, too, as the technic has been perfected, results have become more and more encouraging. Radium has the decided advantage that it may be placed, in most cases, if not into the tumor, at least in close proximity to it.

Peculiarly enough, fibroids do not all respond to radiation in the same degree. It will be remembered that neoplastic tissue—not only tumors but, e. g., scar tissue as well—is more vulnerable to actinic rays than ordinary tissue. Various tissues vary, for example, epithelial structures are more vulnerable than muscle or connective tissue structures. Again, individuals show wide variations, it being well known that some persons are more subject to sunburn than others.

Radium, like roentgen rays, produces a shrinkage of fibroids in two ways: (1) by causing degenerative changes in the blood vessels and a destruction of the neoplastic tissues as such; (2) by producing a sclerosis of the ovaries; in other words, a more or less complete menopause. In some cases a fibroid may be removed and menstruation, even pregnancy, appear afterwards. However, in most cases the menopause is absolute. It will be remembered in this connection how vulnerable both male and female sexual glands are to the roentgen ray. This latter feature makes treatment by radiation undesirable in young women for it is seldom possible to graduate the dose so as to remove the fibroid without permanently damaging the ovaries. There are other contraindications, e. g., inflammatory conditions of the adnexa, which are sometimes stirred up by radiation. On the other hand, the treatment of fibroids by radiation, especially with radium, is at the same time so simple, so effective and, in properly selected cases, so free from danger that it appears to be the method of choice for their removal.

Should the patient have other conditions which call for surgical intervention, of course the fibroid uterus may as well be removed at the same time. In young women or in cases where single nodules might be enucleated, operation should be done. However, in all uncomplicated cases in women past 38 or 40 years of age treatment by either roentgen rays, or preferably radium, in the light of our present knowledge, is the most satisfactory method of removing uterine fibroids.

626 Metropolitan Building.



# THE JOURNAL

OF THE

## Missouri State Medical Association

NOVEMBER, 1920

### EDITORIALS

#### NEW DATE FOR POSTGRADUATE MEETING IN ST LOUIS

The committee in charge of the postgraduate meeting in St. Louis found the dates previously announced conflicted with some very important medical meetings which would deprive the postgraduate meeting of such a large number of clinicians that it has been decided to hold the meeting on Monday, Tuesday and Wednesday, November 22, 23 and 24. An added reason for postponing the meeting to these dates was the fact that the out-of-town speakers could not be present on the other dates.

The work of assembling clinics is progressing rapidly and we anticipate that the members who attend the meeting will be rewarded with a large number of cases and a great variety of conditions to be demonstrated. As soon as the programs are prepared copies will be sent to the secretaries of county medical societies and members in St. Louis will be privileged to send copies to physicians who will be interested in attending the meeting.

#### PHYSICAL DIAGNOSIS TO THE FOREFRONT

In the past decade a vast amount of research work has been developed mainly in the fields of laboratory endeavor. New diagnostic tests, serological and chemical, refined methods in functional tests, bacterial grouping and typing, basal metabolism, blood chemistry of diabetes and nephritis, and newer modifications of other tests, have been proposed. Clinical medicine has undergone a decided advance because of these studies. Our leading schools are pointing with pride to the amount of research laboratory work they are turning out. In fact, certain schools have come to be called research medical schools.

A note of warning should be sounded because of the fact that physicians are graduated yearly who either lack the essentials of careful physical diagnosis, or become so enthused with the laboratory spirit that they are carried away by it

and forget the importance of careful physical examination. How often will an intern tell us of the plus Wassermann, the leukopenia, or the hyperchlorhydria, leaving the physical examination far in the background. This note is not belittling laboratory and research work. It is only desirous of attempting to show the value of a careful physical examination in addition to careful history and laboratory work. Let there be more of the laboratory and research work, but let us not in our zeal crowd out the important physical examination. Is it because laboratory work is easier that our elementary inspection, palpation, percussion, and auscultation are being neglected?

A paper of practical interest is one presented by Lipsitz in this number. He calls attention to a method of percussion which yields him satisfactory results. Percussion is one of our most important methods of diagnosis and yet how often neglected. A more concerted effort to preserve and emphasize the value of technical methods in physical diagnosis is desirable.

#### THE NEW FRONTIER

Every now and then a book is written that has such outstanding qualities that to dismiss it as lightly as one dismisses the general run of books would be doing the author a grave injustice. This remark applies to medicine as well as to general literature. Who has not wondered at the number of medical books that are put out each month and also wondered why they were written and who the readers would be? But though wonderment holds one in this matter, one should not include all books in this remark, for ever and anon a medical work appears of arresting qualities. These qualities should meet with favor from the discriminating reader, his powers of discrimination being developed to the point of finding gold among much dross. Having arrived at this stage in his education he no longer wonders because so many books on medicine are written, but he wonders if others are as discriminating as he in the matter of ferreting out a book that is far above the average. This enviable attitude applies as well to general literature; and on the part of the medical reader it is certainly an enviable attitude if, when he reads a book on general literature, it occurs to him that many principles in the book can be applied to medicine today. Such a book is Guy Emerson's "The New Frontier." \*

\* The New Frontier. By Guy Emerson, New York: Henry Holt and Company, 1920.

It is needless here to go into detail as to the brief which "The New Frontier" holds of interest to the industrial world. These problems and their solution lie not in our province. But the principles of "The New Frontier" lie very close to medical thought today, medical thought as understood by those who have American medicine at heart, inasmuch as they feel that there really is such a chapter in medicine as American medicine, and that its sustenance must be maintained today as never before if we would also have "A New Frontier." In the past—not the past as evidenced in the '80's and '90's, but a few years before the World War—it was the custom, perhaps the fashion, to drink deep of certain Continental European springs in the hope of making medicine in this country the equal of medicine in Europe.

This movement had commendable qualities: it was the means of opening up new horizons, of widening the medical outlook here so that it would approach a complete understanding of the best European medicine and the adoption of the most approved operative and therapeutic methods in vogue. So far so good. But this custom or fashion like all customs and fashions was soon to leave the narrow limits of a study of European medicine and reach out for the reasons why, in certain respects, European medicine was on a higher plane than medicine with us; and much thought was given to this subject and many minds began to work on it; minds thoroughly unfitted for the task but most receptive because they were young minds in the bodies of young men who had gone to Europe—Continental Europe—to get the finishing touches to their medical education. Hordes came back as hordes went over, and whether it was the "crowd" from an eastern or a western city, the obsessing thought of each and every one was that American medicine, educationally considered, was all wrong and that the Continental European ideas must be introduced here if we would save American medicine from becoming a poor, emasculated thing, the scorn of the intelligent. Thus arose with us those educational methods whose peculiarities made for a Janus-faced sort of medical teaching—one half of the face turned toward Europe and one half—sometimes only one third—of the face turned toward America. Our European frontier was widened and our American frontier was narrowed until just before the World War to utter one's doubts as to the success of it all was thought the worst sort of sacrilege.

That there is a new frontier in medicine just as Guy Emerson so happily points out in his book there is in the industrial world must be apparent to all. This new frontier is peculiarly American, rampantly so; and even though this change may bring in its train things that will somewhat narrow our point of view for a time, out of it there will arise a structure whose base will be adamant, and no matter how large or extensive the superstructure of the Continental European fads and fancies, the superstructure will never again submerge the foundation. But better still, the new frontier will draw no distinctions between the man who has spent three months abroad roaming from clinic to clinic and learning very little, and the man who stays at home, plods along, and acquires a solid working basis for his vocation. The far-flung new frontier in medicine will be as inclusive as any frontier has ever been and the country doctor will no longer be abashed in the presence of the city doctor, not because one is a country doctor and the other a city doctor, but because, as has heretofore obtained, the country doctor had never been abroad and the city doctor had. The snobbishness brought on by a short sojourn in Continental Europe with its smatterings of medicine and its abortions in the matter of foreign languages will no longer hold water and the snobbishness of certain schools because their curricula were founded on Continental European ideas will no longer be the envy among those who used to be blinded by the advantages accruing from the fact that Continental European medical thought held the teachings in a vise-like grip. A narrow view this of a new frontier that shall be peculiarly American! But just as in other national matters, out of the narrowness there will gradually come a wider outlook, a larger vision, a discriminating receptiveness, which under no circumstances will be forgetful of its underlying principle of intense Americanism.

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#### HELPING THE FEEBLEMINDED

In the mental surveys of the three state industrial schools which have been completed by the National Committee for Mental Hygiene, Dr. Haines has had the cooperation of the divisions of child hygiene and of venereal diseases of the state board of health. By this cooperation complete physical examinations have been made of the girls at Chillicothe and serum Wassermann tests of the boys at Boonville.

By securing such cooperation and by using the



results in diagnosis and prognosis concerning these juvenile wards of the state, the National Committee emphasizes the fact that mental examination work is only a part of a larger medical service to the community. Whether or not a given person is to be adjudged feeble-minded and therefore placed under special training or in custody, or both, is not determined by a mere "mental test" or series of mental tests. While the mental equipment of the individual is a most important element in the situation, what he does or can be induced to do with his mental machinery is the vital issue. Feeble-mindedness, like insanity, is a social concept. It involves character—the organization of the whole individual person as a social unit. It is the *behavior* of a person which really determines the diagnosis and the prescribed treatment for our mental defectives and near defectives.

To get at the person in this broad and all round fashion involves the use of the medical sciences and especially medical practice. To see a boy's delinquency, his checkered career in school and in industry in relation to his mental defect, and to see the causal relations of one thing to another, one must first get at the boy as a biologic entity—know his personal history and his family history as the medical man is trained to obtain and evaluate such histories; and second, one must see and evaluate his behavior in the light of an extended experience in the field of psychiatry.

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#### A COMING EVENT OF MARKED SIGNIFICANCE

It is a far cry from the burning at the stake of mortals who were supposedly endowed with the art of witchcraft to the present day dissemination of information about venereal diseases. While the world revolves, destiny steadily spins her thread of progress with little if any heed at man's efforts to alter the warp and woof of her weaving. The ancient and eminent Aristotle declared in his discourses that "wonder was the first cause of philosophy." Most of the things in this mundane sphere which gave rise to man's wonderment were factors of positive qualities rendered fascinating by their beauty and perfection. Some complexities, however, were so terrible in their correlation to human existence that man dared not inquire into the why and wherefore; as a consequence, with the passing of each century, ignorance exacted its terrible toll of human

suffering written in despair and anguish. The mandate: "Ye shall know the truth; and it shall make ye free," had been rendered quiescent by the force of man's egoism and obtunded by the shield of prudishness.

Came a day, however, when the forces of retrogression, which had succeeded in quashing the potential desire of the medical profession to disseminate truth, began losing ground. The latent sparks of justice so long dormant commenced to scintillate here and there, and soon the words gonorrhea and syphilis were released from the medical "index expurgatorius" and made their timid appearance in the lay press. Diffidence seemed entirely unwarranted so all pretense was dropped; truth had arisen above pious hypocrisy and the battle was on and today these cognomens of man's shortcomings are discussed freely on screen and in the press. The canker which has been gnawing at the vitals of humanity has been exposed and now mankind bids fair to become rid of an obnoxious influence which had come to be regarded in the light of a necessary adjunct to civilization. We seek no quarrel with those who have for centuries trammelled the natural impulse of physicians to educate a lay public to the dangers of the ever lurking germ of genital infections, but we do hope that their blatant polemics are stifled forever. All of which leads up to the subject of this editorial.

Nov. 22 to Dec. 4, 1920, there is to be established at Washington, D. C., an Institute on Venereal Disease Control and Social Hygiene, under the auspices of the United States Public Health Service. The aim of the Institute as divulged in a recent bulletin of the department at Washington, is to afford a short and intensive course which will embrace in a comprehensive manner the various phases involved in the general attack on venereal diseases. The course will be arranged to furnish the necessary information for "health officers, private practitioners, educators, psychologists, sociologists, and others who are concerned with the vital questions of venereal disease control."

The staff of instructors will be composed of "the best men and women in those subjects related to the control of venereal diseases." Among the numerous names listed on the faculty are: Drs. John H. Stokes of Mayo Clinic, Hugh Young of Johns Hopkins University, John A. Fordyce, Edward L. Keyes, Jr., and many others of national renown. It is needless to enlarge on the manifest value of such a course of instruction by a corps of in-

structors representing the most eligible in their various vocations.

This will be a rare opportunity for all interested individuals to become conversant with the latest that progress has to offer in the various branches of this line of endeavor as well as to encourage the federal government in the ambitious project which is being launched steadily and continuously in a consistent effort to wipe out our nation-wide scourge. All individuals who are eligible to enroll should take advantage of this opportunity to enhance their fund of knowledge and increase their prestige. We trust that this venture of the Public Health Service will meet with a deserving success and that the Institute will become a regular event.

All those who are interested in the elaborate and comprehensive program arranged by the Washington officials will do well to write for a bulletin of information, addressing the United States Public Health Service, Washington, D. C., or The Executive Committee, All American Conference on Venereal Diseases, 411 Eighteenth Street N. W., Washington, D. C.

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### PSYCHOLOGY AS A FOE OF PRIVACY

It has been the custom in the past and is the custom today to greet with acclamation any invention that will smooth out those wrinkles in our daily life which result from annoyance in our up-hill work in the achievement of success. The telephone, electric bells, electric lights, aeroplanes and talking machines, generally considered of great benefit to us, are inimical to our privacy; have taken it and stripped it of all those cherished qualities which made it after a hard day's work something to look forward to with joy, something to desire as an antidote for the worries of our lowly or exalted vocations. In a recent issue of the *London Times* there are some weighty and important words on this subject, and though the reader may think the article too conservative—an obstacle to progress—it yet contains considerable food for thought. Is it not a fact that our privacy has been ruthlessly invaded by modern inventions, and is it not a fact that the glare in which we continue to live, after we fold our tents in our offices, is not the sort of thing that makes for complete surcease of the petty and big upsets which have occurred during our working hours? Thus science, well meaning and putting out its many tentacles in the hope of ameliorating our earthly existence, is

the cause of considerable mischief, is perhaps the real agent of our increasing nervousness despite the "high" principles set forth in the innumerable "Why Worry" books. And added to the above mentioned inventions there is psychology, which has caracoled into our existence on a steed, untamed, and caparisoned in such alluring colors that every one today is an embryo or a full-fledged psychologist.

No doubt the reader of these lines will disagree with us and denounce the steps which we would take backward when the cry today is for greater progress, for more light. But even though we anticipate his adverse criticism we are not discouraged or disheartened but shall promulgate our reasons for taking a very enthusiastic view of the inroads of psychology in our daily life. In days gone by when one shook hands with another, the handshake had but small significance. We either said our friend was tired physically when the handshake was of the languishing sort or that he was physically fit when the grip was strong and lasting. Sometimes the handshake on account of its durability made us think that here were mental strength, probity, and deep regard expressed in a physical way. Today a handshake has an altogether different significance. In case it is light, the subconscious mind is working against the conscious mind for reasons which are not clear to us at once; but the thought is with us that this sort of handshake should be subjected to psychanalysis, hence is a complication—a problem—which formerly was a simple, understandable act. A friend tells us about his dream. We assume a supercilious attitude toward his recital and pity him on account of his extreme ignorance. We tell him that his interpretation is old-fashioned, that dreams have a rare and extraordinary significance; we attempt and often succeed in making him a convert to the "higher psychology." Suppose the man we meet manifests but a slight interest in our conversation and continually shuffles his feet. Formerly this act was construed as due to lack of manners; we pronounced the offender a boor. Rudeness today can be easily traced to the subconscious mind; so easily that the offender can at once be made host to a complicated mental condition of which he was perfectly ignorant until we enlightened him. Every grimace, every movement, every physical peculiarity which was formerly called a mannerism, and every mental twist which was formerly called a crotchet, can be explained in the light of psychology; and the being who



would desire to withdraw himself from our ineffable rays of penetrative intelligence would fare badly indeed. Even closed doors are as nothing as obstacles to our powers of detection; and the beam that Jupiter shot towards earth from Mount Olympus when he desired his gaze to rest on Leda, was a weak, flickering ray compared with the beam which shoots from our eyes today, backed and buttressed by our knowledge of the "higher psychology."

Is there any room for privacy under these extraordinary circumstances? Can a secret be withheld from a minority or a majority? Can one live the inner life, that life for which all humans long at certain times and under certain circumstances? We think not. Privacy has gone the way of other good things in this world, thanks to the advent of science. We do not decry science when science leads us along the broad avenue of thought and enlightenment, but when science jingles bells around us continually, makes the rooms we live in a glare that makes us blink, and prevents us from living a mental life which is ours to have and to hold—then, we say, science is assuming toward us the attitude of the autocrat who would crush the naturalness out of life and make a Frankenstein to affright all mankind.

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### PHYSICIANS' RECOMPENSE AND SOUND BUSINESS

Brought face to face with the individual who coined the phrase "noble profession," we suspect that we could without much further provocation commit homicide, provided that this mortal could give no better reason for the appellation than that it was based on the practice of physicians extending and the laity cheerfully accepting gratuitous professional service; and we believe furthermore that we would be freed of all legal responsibility on the plea of "emotional" *sanity*. Humanity in passing has produced many a fatuous proposition, but one so utterly absurd and devoid of any iota of reasoning as the one involving continual benefaction, has seldom come to our attention, and to coin one equally senseless would transcend the power of our imagination.

Therefore it is that we hear frequently of a movement on foot to establish a fund for physicians impoverished in the wintry period of life on account of a too close adaptation to the phase of the profession's nobility leaving us to assume that the wife or widow of such an individual gazing back at a retrospective with

potential possibilities neglected, sighs sadly and like the savage slave of Prospero in "The Tempest," mutters anent herself being a "thrice cursed ass" for the choice of such a husband. It is difficult to deduce just how or for what reason the world "got that way." Certain it is that the average physician by his nonchalance toward fundamental business principles has fostered rather than discouraged this attitude on the part of the public and that public has not hesitated to pierce this crevice in the physician's professional armour.

One seldom if ever hears of lawyers, engineers, musicians or members of other utilitarian professions posing as charity institutions, and yet from the very inception of our reasoning power we have been impressed with the fact that the medical profession could be regarded as according service equal to that tendered Samuel Weller of Pickwickian fame: "free, gratis, for nothing." One of the boomerang decisions which the laity seems to have grasped as a result of the charitable inclination of the medical fraternity toward those unable to pay a regular fee is the idea that those who are able to meet their obligations to their physician must of necessity in all instances make up the presumable deficit caused by the poor; in fact, some physicians have stultified their professional ability by using this same argument to meet that of some one protesting against a regular and reasonable fee, when in reality the recompense has been none too great for the nature of the service rendered.

We suspect that one of the reasons which often prompts patients to relinquish the service of the regular medical fraternity for that of the pathies, fake cures, and practors, is on account of this very unsound correlation between professional idealism and good business requirements. The above mentioned knights of the pocketbook have shown a marked superiority to the regular physician where the "laying 'in' of hands" was concerned, with the result that a neurasthenic public coupled with asinine legislation supported by successful lobbying has "fallen" for the brazen cheek displayed by these "irregulars" and is paying exorbitant fees for knowledge (?) gained at a short course in a correspondence school or an occasional visit to a night school, while the "noble profession" continues its uphill path on an arduous road beset by the stumbling blocks of idealism.

Another outcome of this poor business ability is the continual defrauding of physicians by

smooth tongued sharpers whose glib suggestions and variegated oil and mine stocks have brought despair in the wake of an honest professional career. At times we are tempted to deduce that it is not entirely idealism that is responsible for the untoward occurrences in physicians' methods in dealing with their clientele from the business viewpoint. It is possible that the true definition is the indifference of a slothful nature which causes the medical man to fall by the wayside as a financial entity, while most other vocations are reaping abundantly of harvests only too often illogically apportioned or entirely unwarranted. If this contention be unreasonable, then why is it that fakers and impostors will expend almost superhuman efforts in energy and money to obtain the proper legislation—or pretense for such—while the members of our profession sit at home in indolent languor depending on the law of compensation to adjust matters. The many movements on foot at present to boost preventive medicine are very laudable even though they are minimizing the source of physicians' incomes, but one suspects that some morning medical men will arise to find a new order of things wherein all lines of medicine have been "socialized" and compensation for services adjusted by the state or national governments; and then human nature will assert itself and there will be a good deal of blatant bellowing anent what might have been. It is certainly high time that medical men were taking stock of their deficiencies in the paths we have outlined, and beginning to accommodate themselves to the monetary requirements of an exacting nature that are accompanying the rapid transitions of the times.

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### THE FLAW IN OUR AMERICAN DIAMOND

Again Mammon has scored a victory and now American ideals stand impeached before the judgment seat of world opinion. It is a fortunate phase in the equality of things that this scandalous occurrence in the baseball world did not eventuate before the recent upheaval, since foreigners were then only too apt to cast the invidious aspersion toward our democracy that the goal of our national ambitions could be designated by the dollar mark. Since then we have given too freely of our gold and the flower of our manhood ever to warrant incurring this unfair discrimination.

But where do we stand here at home? Is the canker less intense in the pain it produces,

now that it has been exposed, or does the draught taste less bitter, albeit the world's passers-by avert their heads in well meaning but nevertheless assumed heedlessness, while they chuckle inwardly? The degradation of our national game by an influx of the ubiquitous and omnipresent crook arouses our ire, not through a sense of piety but rather because baseball has been serving as a therapeutic agent of rare utility for the great mass of Americans of all estates. It is true that many an office boy and perhaps a husband occasionally have "perjured" their souls with a white lie through fascination for this great sport, and have resurrected many a grandmother for an "extra funeral"; but such mild straying from the narrow path could be tolerated, aye, even forgiven, in view of the beneficial results which accrued to the individual fortunate enough to be a spectator at a professional game of baseball.

The high strung character of our American psychology is such that a frequent relaxant is very essential toward maintaining stability. Our national sport affords this required diminution of tension to a remarkable degree; likewise has it served as a stimulant for the phlegmatic individual whose lymphatic temperament has often been roused to the verge of pugnacity while seated in the grandstand. Not without reason has this marvelous game elicited such varying reactions. Above all other sports is baseball manifestly a product of brain and brawn highly organized and well coordinated. Few other sports have ever equalled in caliber the thrill-producing tension actuated while the leather covered sphere was being hurled in a manner calculated to elude the man at the bat. There have been two pastimes of national recognition in the past which have emulated baseball, but were doomed through an incursion of the same rotten impulse which is at present threatening the prestige of the present favorite. Not without a tinge of lingering regret do we gaze backward in melancholic retrospection to the days when horse racing and boxing were clean sports untainted by the advent of the social parasite. We have quite naturally always had with us those quasi pious individuals who have thrown up their hands in horror at the practice of utilizing horse flesh for racing and manly physique in contention for supremacy of the prize ring, but not until sheer graft was really demonstrable in both these sports were these mortals capable of producing any tangible evidence to sustain their importunate hecklings, albeit there was no gainsaying the potential possibilities for crookedness in either diversion.



According to late press reports there seems to be an ominous spirit of rising resentment against all professional baseball men and the professional game in general. This is quite natural and was to be expected from a public that has been as lavish as we have here in America with our esteem and admiration outrunning the bounds of any form of chauvinism. Mankind has in all ages evinced a pendulum-like psychology in its demonstrations of hero worship and likewise in the spirit of condemnation. Seldom if ever do we seem to strike the happy medium where public esteem is concerned. Let us therefore be tolerant and rely rather on the law of natural equation to adjust matters in a satisfactory manner. We have enjoyed baseball for so many years that we can afford to cope leniently with an iota of iconoclasm in the passing. Our national game is an institution that has become so blended with our existence that it has reflected our desires, gauged our standards and left its imprint on our aims and ideals. Shall we therefore become reckless in our censure and forget so soon? Baseball has always attracted to its banner men of reliable caliber in body and mind; therefore let us rather continue to encourage the right sort to take up the vocation of professional player, but manifestly there will have to be exercised more caution in the future so as to reduce to a minimum the possibility of a recurrence of the present perversion of the game.

Pedagogues feel, and justly so, that this game is capable of eliciting all those qualities which make the American youth a superior factor in the world's struggle for existence. By all means then let us continue to "play ball"; but let us follow the sport in a manner calculated to keep unblemished the rampant emblem on the sporting field of our national escutcheon; in other words, let's play it the American way.

## BOOKS FOR LEISURE MOMENTS

*Reading with discrimination broadens the mind  
and strengthens the mental grasp*

THERE are styles in the manner of writing books just as there are styles in dress and what was considered a fortunate literary style some years ago is today dubbed exceedingly commonplace. Robert Louis Stevenson was until recently held up to us as a master of literary style, but already we are hearing that what we thought perfect just prior to the war, is far from perfect—in fact, is not worthy of our at-

tention if we are in pursuit of an artist in words. Thus, literary models change, and what was thought something to be emulated yesterday is something to be decried today. Today impressionism in the art of writing seems to have the upper hand, and while our recognized writers of the novel appear not to have the temerity to indulge in this vague expression of their thought, yet the new ones of talent are less held fast by the conventions and are giving evidence that the time is not far distant when the style of our novels will be completely changed. A book in point is "Woman," by Magdeleine Marx (Thomas Seltzer, New York), albeit a translation from the French but with such decided evidences of the complete change in the manner of writing a novel that it should give us pause. In the first place this book has received a great deal of praise from men in the literary world who stand at or near the apex, and in the second place it has called forth laudatory reviews from critics who are not given to praise unless a book is of an outstanding nature. Now what does this book consist of in a literary way and also as a true exposition of the character of modern woman as modern woman is a sign of the times? Detached sentences written when the author was in an emotional state, glimpses of scenery and character of the nebulous sort that tantalize the reader until he almost cries out with pain, impressions piled on impressions when a few words expressive of an uninterrupted train of thought would bring the scene or the character before the reader in an understanding way. Each page of this book is marred by jerks and sudden change of thought: a mind whose functions are rampant and never quiet, orderly and sane. No woman, no matter how well her equilibrium was in the start, could live through the variegated mental phases of the heroine of this book without finally being compelled to take a rest cure in a sanatorium. Here are abnormality and irresponsibility pictured in staccato tones, and here are selfishness, self-concentration and self-detachment. Whether a book today is called "Woman" or "Man" it should above everything give us a complete picture of society as society affects the individual. The individual being a part of society must illustrate in his or her mental attitudes the influences of environment. Only then is character worth while, and only then does the reader profit. The man or woman who lived in mid-Victorian times is to a considerable extent different from the man or woman who came later on; and the man or woman living today—an exemplar of the

thought of the world today—is a new and interesting manifestation. But the man or woman who is so self-centered that environment is of no importance in shaping character is not illustrative of the age: it is not a new note in fiction, but the old one that has been overworked by many novelists. That the author is not devoid of talent is evidenced every now and then, but her mind needs curbing on many occasions, for good descriptions and excellent opportunities at character drawing have been wilfully destroyed.

P. S.

A WELL-TRAINED mathematical mind it would take indeed to count the number of sex books which have been published in recent times, and although we thought that the Great War, what with its upheaval of ideas and its aftermath that would surely straighten out our pre-war mental twists, would land us in a peaceful valley where contentions would be unknown, we find today that our mental twists are as prevalent as ever and that subjects as put forth in near-medical books are just as contentious. Not that all sex books are due to mental twists or are contentious; some indeed have a degree of sanity most commendable and are quite free from the spirit of contentiousness. To the latter class belongs "Sanity in Sex," by William J. Fielding (Dodd, Mead and Company, New York); and well worth reading it is on account of the absence of the blemishes mentioned above. But granting its sanity and its spirit of conciliation where controversies still rage in most sex books, it has a weakness which we greatly deplore, namely, a repetition of matters which have already appeared in numbers of sex books. Take for instance the chapters on "Conjugal Happiness" and "Birth Control." Here the author tells us nothing new—perhaps there is nothing new to tell—nevertheless, why repeat what we physicians know by heart? And even admitting some value to these chapters despite their being a repetition of things we have already read—some value to the lay reader—they do not ring true, for the reason that the reader, be he medical or lay, will be tempted to apply what is set down in these chapters to all cases with which he comes in contact when the fact is that what is said should apply only to special cases. To devote only twenty-one pages to so complicated a subject as conjugal happiness, and thirty-five pages to birth control, is using brevity where no wit is intended as it has never been used before. The medical reader versed in the subject can, of course fill in the

empty spaces with things he has read in other books, but how about the lay reader for whom, we take it, this book was especially written? He will gather small knowledge and will do considerable harm by applying it to others as well as to himself. If birth control is advocated in a sex book and the contraceptive methods as well, why not mention what these methods are? No author should half-enlighten the nonmedical reader and thereby put him on the wrong road. No doubt it is against the law to mention in detail contraceptive methods in a book; then why write a chapter on birth control? It is with considerable prejudice that we view the general run of sex books, not because we are altogether opposed to them but because we cannot brook what is only a flimsy affair to the well-informed physician and a matter of misleading to the layman.

P. S.

OPTIMISM is the prevailing note of "Yours for Sleep," by Dr. William S. Walsh (E. P. Dutton and Company, New York), and a good note it is and worthy of the highest praise. We are inclined to be pessimistic when minor ailments, on account of their number and on account of their persistence, upset us unnecessarily, and though outwardly we may make light of them, inwardly we feel that our minor ailments are a nuisance which if combated in the right way would no longer be the means of causing our upsets. In the rush of life—and this rush has always been with us—we overlook the necessity of having our minor ailments looked after properly, and although where the mind is so well-trained that small account is taken of them, the individual comes in for praise from those who admire mental fortitude in the face of minor physical and mental disturbances, the fact is that by neglecting the writing on the wall as given forth by our minor ailments we do our system considerable harm and make altogether too light of preventive medicine. Dr. Walsh writes in an interesting and convincing manner on how best to recognize and how best to combat our minor ailments, and also gives sound advice as to the means by which we can achieve an end that will be of real benefit to us. Scientifically, the book has no value, and if the reader wants a presentation of the large problems in medicine and their solution he will be greatly disappointed. But as a readable book, written with considerable regard for the literary values, characterized by common sense, it is to be commended, with the exception of the chapter on "Worry," which contains advice



of the nature that the easy-chair philosopher is continually dinning into our ears. We were congratulating ourselves that the easy-chair philosopher had gone out of fashion and that a new era had set in, but Dr. Walsh's chapter on "Worry" proves the contrary: the easy-chair philosopher with his gratuitous advice amounting to "my own patent to vanquish worry," is still the quintessence of monotony and homely, too homely, philosophy. P. S.

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## NEWS NOTES

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THE fourth annual roll call of the American Red Cross will be held November 11-25. This is the annual period for joining the Red Cross and renewing memberships.

DR. M. P. RAVENEL of Columbia, Director of Preventive Medicine at the State University, was elected president of the American Public Health Association at the annual meeting held in San Francisco recently.

THE next meeting of the Southern Medical Association will be held in Louisville, Ky., November 15-18. One of the special attractions of this meeting is the scientific exhibit to which any member from Missouri is invited to send exhibits. Dr. E. H. Carey of Dallas, Texas, is president and Dr. Seale Harris, Birmingham, Alabama, is secretary.

THE Fifteenth Annual Meeting of the Medical Association of the Southwest will be held at Wichita, Kan., November 22-24. One of the features of the meeting will be the second annual reunion of medical officers of the Army who are members of the Association. Dr. E. F. Day of Arkansas City, Kan., is president of the Association and Dr. F. H. Clark of Oklahoma City is secretary.

DR. C. W. BURRILL of Kansas City was elected Surgeon-General of the Grand Army of the Republic at the national encampment which was recently held in Indianapolis. Dr. Burrill was medical director, Department of Missouri, of the G. A. R., in 1919 and was reelected to that position this year. He has practiced in Kansas City for over forty years and was elected an honorary member of Jackson County Medical Society last February.

THE following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Armour & Co.; Corpus Luteum Tablets-Armour 5 grains.

Diarsenol Co.: Sodium Diarsenol; Sodium Diarsenol 0.15 Gm. Ampules; Sodium Diarsenol 0.3 Gm. Ampules; Sodium Diarsenol 0.45 Gm. Ampules; Sodium Diarsenol 0.6 Gm. Ampules; Sodium Diarsenol 0.75 Gm. Ampules; Sodium Diarsenol 0.9 Gm. Ampules.

United Synthetic Chemical Corporation: 20 per cent. Aromatized Suspension made from Benzyl Benzoate (Van Dyk and Co.).

The Heyden Chemical Works: Proganol.

Change of Agencies: Arheol and Riodine. The Council has directed that the description of Arheol (New and Nonofficial Remedies, 1920, p. 251) and Riodine (*Jour. A. M. A.*, Aug. 14, 1920, p. 477) be revised to state that these products are manufactured by P. Astier Laboratories, Paris and New York, and are distributed by George J. Wallau, Inc., New York.

Benzyl Alcohol (Van Dyk and Co.): Benzyl Benzoate (Van Dyk and Co.): The Council has directed that the description of Benzyl Alcohol-Van Dyk and Co. (New and Nonofficial Remedies, 1920, p. 28), and Benzyl Benzoate-Van Dyk and Co. (New and Nonofficial Remedies, 1920, p. 50), be revised to indicate that the United Synthetic Chemical Corporation is the distributor of these products.

Official articles not within the scope of New and Nonofficial Remedies: Capsules Folia-Digitalis (Upsher Smith): Tincture of Digitalis (Upsher Smith): These products are sold by Upsher Smith, St. Paul, Minn. The Council finds that they have the status of official articles and are, therefore, not within the scope of New and Nonofficial Remedies.

THE Venereal Disease Division of the State Board of Health has established twenty-one venereal disease clinics throughout the state for the free treatment and education of persons unable to pay for private treatment. The following clinics are in operation:

### AT ST. LOUIS

Municipal Courts Building, Fourteenth and Market Streets; Dr. M. C. Woodruff, Director.

Washington University, 509 South Euclid Avenue; A. K. Mathews, Director.

Jewish Hospital of St. Louis, 5415 Delmar; Margeret Rogers, Director.

Mullanphy Hospital Dispensary, Montgomery and Grand; Sister Chrysostom, Director.

St. Louis University, Grand and Caroline Avenue;  
Dr. Hanau Loeb, Director.

St. John's Hospital Dispensary, Twenty-Third and  
Locust Streets; Sister M. De Sales, Director.

Alexian Brothers Hospital, 3933 South Broadway;  
D. Horn, Director.

#### AT KANSAS CITY

Sixth and Walnut Streets; Dr. Edward H. Clark,  
Director.

General Hospital, Twenty-Fourth and Cherry;  
Major W. L. Gist, Director.

Old City Hospital, Twenty-Second and Cherry; W.  
J. Thompson, Director.

Men's Department, Municipal Farm; Dr. K. W.  
Kinard, Director.

Women's Reformatory; Dr. K. W. Kinard, Director.

Jewish Dispensary, Harrison and Admiral; Dr.  
Julius Frischer, Director.

Swope Settlement Clinic, Sixteenth and Campbell;  
Dr. Walter Campbell, Director.

Helping Hand Society, Grand and Missouri Avenue;  
Dr. Sam H. Snider, Director.

#### AT OTHER POINTS

Springfield, 224 Woodruff Building; Dr. William J.  
Wills, Director.

Sedalia, 209 South Ohio Avenue; Dr. C. B. Trader,  
Director.

Joplin, First and Joplin Streets; Dr. Albert J.  
Chenoweth, Director.

St. Joseph, Community Hall, Tenth and Lafayette;  
Dr. J. J. Bansbach, Director.

Hannibal, County Court House; Dr. J. W. Har-  
desty, Director.

Jefferson City, Court House, Corner High and  
Monroe; Dr. Richard P. Dorris, Director.

### MEMBERSHIP CHANGES, OCTOBER

#### NEW MEMBERS

Bouhasin, Abraham, 1029 Chouteau Ave., St.  
Louis.

Gettinger, Andrew J., 3600 N. 14th St., St.  
Louis.

Greer, Eugene G., 1011 N. Garrison Ave.,  
St. Louis.

Mueller, Robert, 3104a N. Grand Ave., St.  
Louis.

Ragan, Stephen H., 621 E. 31st St., Kansas  
City.

Schroeder, Walther H., 3023 Shenandoah  
Ave., St. Louis.

Wachenfeld, Carl H., 500 Carleton Bldg., St.  
Louis.

Willhite, George Otto, 3903 DeTonty St., St.  
Louis.

Withers, Sanford, 721 University Club Bldg.,  
St. Louis.

#### CHANGES OF ADDRESS

Burgess, John W., Leeton, to Higginsville.

Chaffin, Elizabeth B., St. Peters, Minn., to  
Dept. of Student-Health, Iowa City, Iowa.

Cook, George E., 1809 N. 9th St., St. Louis,  
to Page and Newport, Webster Groves.

Cunningham, Orval J., 807 Waldheim Bldg.,  
Kansas City, to 3310 Harrison.

Freudenberger, Henry C., Clarksburg, to  
Woodman Sanatorium, Woodman, Colo.

Heiple, Edward E., 3772 S. Broadway, St.  
Louis, to 3514a Wyoming St.

Hellrung, Frank J., City Hospital, St. Louis,  
to 2604 Gravois Ave.

Horn, Albert H., Steelville, to % Michigan  
Home, Lapeer, Mich.

Kramolowsky, Helmuth H., 5639 Julian Ave.,  
St. Louis, to 735 Interdrive, University City.

Kring, Richard, Koenig Apts., Grand and  
Victor, St. Louis, to 209 Lister Bldg.

McGann, Peter J., Columbus, to Freeburg.

Miller, Leslie B., 808 E. 44th St., Kansas City,  
to 4545 Charlotte St.

Myers, George M., St. Louis, to % Medical  
and Surgical Clinics, Pueblo, Colo.

Orr, Charles A., Mendon, to Hughesville.

Pringle, John A., 316 Frisco Bldg., St. Louis,  
to 2504 N. 14th St.

Scott, Allen G., Cardwell, to Jonesboro, Ark.

Wade, James H., Ponce de Leon, to Ozark.

Wagenbach, William F., 5800 Arsenal St.,  
to 5825a Gravois Ave.

Wheelon, Homer, Bethesda Hospital, St.  
Louis, to 4121a Lafayette Ave.

Williamson, J. William, Fort McPherson,  
Ga., to Fort Riley, Kan.

Wilson, William A., 807 Waldheim Bldg.,  
Kansas City, to 3523 Forest Ave.

Wyer, H. G., 5463 Maple Ave., St. Louis,  
to 305 Lister Bldg.

#### RESIGNED

Levy, Aaron, St. Louis.

#### DECEASED

Camp, Walter A., Springfield.

Gordon, David, Chillicothe.

Moss, Woodson, Columbia.

Tracy, John M., Mound City.

## OBITUARY

### LEMUEL T. HALL, M.D.

The medical profession of Missouri has lost  
in the death of Dr. L. T. Hall of Potosi one of  
its most valued members. He was possessed of  
the highest traits of character and exercised



them kindly and fearlessly in their fullest meaning. His sympathetic nature and Christian deportment portrayed forcibly the necessary equipment of a truly great physician. He was a student in the fields of medicine and surgery, and his qualifications kept him always in the front rank during the active years of his life. What he did for organized medicine throughout southern Missouri can never be known, for he constantly and persistently worked for a higher and more proficient standard.

Dr. Hall was born in St. Louis County, Mo., January, 1841. His father and grandfather were physicians. He entered St. Louis Medical college in 1860, but the Civil War interrupted his studies and he and three brothers entered the Confederate Army in which he served four years, receiving the rank of First Lieutenant in the Artillery. While serving in the Army during his stay in Mobile he married Anna Elizabeth Bagby, daughter of Governor Bagby of Alabama.

At the close of the Civil War he returned to St. Louis and after his graduation in 1866 he located in Potosi, Mo., where his entire professional life and willing service was spent, with the exception of four years as physician at State Hospital No. 1, Fulton. When State Hospital No. 4, Farmington, was opened in January, 1903, Dr. Hall was elected the first superintendent of the institution. This position he held for one year and then he returned to Potosi to resume private practice. In his honor one of the cottages at the hospital is named "Hall Cottage." When we think of the pioneer service he rendered in those years of long ago, when in place of roads he found trails to be traversed on horseback, when major and minor operations had to be performed under conditions unthought of now, we realize that nothing but the highest conception of Christian obligations and professional duties could ever have sustained him. His first wife died in 1871, and his second wife fourteen years prior to his death.

He leaves two sons, the Reverend Lemuel Hall of Zion City, Ill., and Dr. Fred B. Hall of St. Louis.

A great physician is gone, but he cannot die,  
His life one long and useful deed,  
His labors all for human need.

#### WOODSON MOSS, M.D.

With the death of Dr. Woodson Moss of Columbia, Oct. 5, 1920, the medical profession of the state loses one of its most honored members; a man who was universally esteemed, and a physician who was loved and revered by all

who knew him. He was a graduate of the Medical School of the State University, 1874, and from the beginning of his professional career he was an active supporter of organized medicine and he contributed his unswerving fidelity and unremitting efforts to strengthen and improve it. These efforts did not go unrewarded, for it was the delight of every medical association of which he was a member to honor him with its highest gifts, these culminating in his election as president of the Missouri State Medical Association in 1902.

Dr. Moss was 68 years old and died of a rupture of the aorta. He had enjoyed good health but a diseased tonsil annoyed him and he asked that it be removed. This was done, but he did not react, doubtless owing to the aortic enlargement, and death followed a few hours after the operation. The high esteem in which the people of Columbia and surrounding communities held him was forcefully evidenced by the universal expression of sorrow they felt for the loss of this good man. The church where the funeral services were held was crowded with his friends and admirers and the merchants closed their stores so that practically all business was suspended during the services.

The Boone County Medical Society prepared a memorial on the life and character of Dr. Moss which was read at the funeral services. The memorial follows:

Memorial address on the life and character of Woodson Moss, M.D., LL.D., presented by the Boone County Medical Society as a special mark of our high regard for the deceased and out of reverence for his memory.

He was born into the medical world on the verge of the passing of the "old school doctor" just as the medical profession entered the new field of science and art, a field that has challenged the respect and confidence and admiration of the world.

A home product, entering the first class (1873) of the medical department of our State University, soon to become one of the leading professors; taking first rank as a teacher in practical medicine, holding it with credit to himself and honor to the department. He was loved by every medical student during his long career of forty years of service. Like the "Old Roman Mother," when asked as to her treasures, she pointed to her children and said: "These are my jewels." So it was with Dr. Moss who pointed to his students and said: "These are my jewels."

Dr. Moss was not merely a Columbia physician. Passing from his County Medical Society to the Linton District Society, in its palmy days, thence to the State Medical Association, not only occupying the presidential chair in each but was regarded as one of the leaders in medical thought. He did his part in making medical history in Missouri. He was complimented by the great philanthropist, Carnegie, who established the far-reaching Teachers' Foundation Fund to be bestowed only on those who earned by a life-time of work for the betterment of man.

Dr. Moss had a tender heart for his patients have seen the tears of sympathy for their suffering roll

down his cheeks. Yesterday, while we were going down Broadway, we met a good woman, yes, a woman who when a child sat on the knees of Dr. Moss and told her laughing joys. Today her hair is sprinkled with the gray of motherhood—she held that hand of ours a moment before either of us spoke a word. Then came eulogy: "Doctor, we have lost a good man." What could have been better said? Good, yes, the good old Saxon good. Man, yes, the man that God made and breathed into his nostrils the breath of life and man became a living soul.

"Life! We've been long together  
Through pleasant and through cloudy weather  
'Tis hard to part when friends are dear  
Perhaps 'twill cost a sigh, a tear,  
Then steal away—give little warning.  
Choose thine own time, say not 'Good night.'  
But in some brighter clime bid me 'Good morning.'"

## CORRESPONDENCE

### A VENEREAL PROPHYLACTIC THAT FAILED

WASHINGTON, D. C., Sept. 15, 1920.

The enclosed letter contains information of interest to those concerned in the general campaign for the control of venereal diseases. The Interdepartmental Social Hygiene Board transmits this statement of the Surgeon-General of the Army with his knowledge and permission.

T. A. STORY,

Executive Secretary, Interdepartmental Social Hygiene Board.

The letter follows:

SEPT. 7, 1920.

*Memorandum for the Surgeon-General, U. S. Public Health Service:*

1. During the mobilization period in 1917 experimental use was made of the tube herein mentioned for troops who were so situated as to be denied the usual prophylactic procedure. The experiment was a failure, and it was promptly discontinued. As a result it has never enjoyed the approval of the War Department.

2. In payment for the tubes employed in this experiment, the Preventube Company received a government check, facsimile of which they are now reproducing as an advertising medium. Legally, I suppose they have some right to do this, and, unfortunately, I know of no steps which the government can take to prevent it, unless action is taken on the ground of fraud. In this case fraud must be established before we can act. I shall take up this question with the Interdepartmental Social Hygiene Board as soon as Dr. Storey returns.

3. Also, there might be some small chance of accomplishing something by placing the matter before the American Advertising Association, and I am now taking steps to bring this subject to their attention.

4. I agree with you that the use of this form of advertising constitutes a serious difficulty which must

be overcome by those who are working to obtain the control of venereal disease. The system is vicious, but unless we can establish fraud, I fear it will be difficult to stop it.

M. W. IRELAND,  
Surgeon-General, U. S. Army.

## MISCELLANY

### PRACTICAL COOPERATION—GENERAL HOSPITAL

In view of the long years of desire on the part of the organized medical profession of Kansas City (i.e., the Jackson County Medical Society), to secure and to establish a perfect understanding and cooperation between the Municipal Hospital and Health Board and the members of the staff of the General Hospital, the following communication is most significant and pleasing:

#### HOSPITAL AND HEALTH BOARD

Kansas City.

SEPT. 1, 1920.

*Jackson County Medical Society, Kansas City, Mo.*

GENTLEMEN:

Conducting the Hospital and Health Department is not an easy job.

Probably you have never undertaken such a task personally, but you are financially concerned in the General, Tubercular and Colored Hospitals, also the Health Department of this city.

The members of the Board who are responsible for the conduct of these institutions have given much of their time and the best of their efforts toward efficient management. Decided improvements have been made, the progress is gratifying and the Board invites you to inspect the results. But more important yet is further betterment. Your suggestions and criticisms are solicited.

The burden (or perhaps we should say the blessing) of serving Kansas City's sick and unfortunate is upon every Kansas Citizen. Let us not permit the haste that is born of good health to make us forgetful of those who are housed and suffering.

No doubt some improvement in the service is waiting only for your good business judgment to seek it out. Won't you bring this letter to the attention of your members and urge all of them to visit one or all of these hospitals at any time? Also, to cooperate with the Health Department for the betterment of sanitary conditions. Sincerely yours,

M. K. ROBERTSON, Secretary.

The attitude and purpose of the Jackson County Medical Society toward improved sanitary conditions in the city, and their recommendations as to staff appointments and standardization of medical and surgical service at the General Hospital are well known, and have been given publicity. The present personnel of the staff has the approval of the officers and members of the county society. The appointment by the Hospital and Health Board of Dr. Gist as superintendent of the hospital is proving most satisfactory. The proper contact between the board and staff is thus well met, and cooperation and harmony, along with more efficient service, are growing more evident every day.

To have secured practical, scientific and humane care for the indigent ill and injured of Kansas City is the one purpose and desire of the Jackson County Medical Society. Such care this society will conscientiously and skillfully give to the city through its Hospital and Health Board. Further, the society appreciates being solicited to offer "suggestions and criticisms" of a constructive nature, and through its proper committees, will respond gladly, on invitation, to sit with the board.

This gives an opportunity for Jackson County Medical Society to thank Mayor Cowgill and his new board for their definite action in the reorganization of the General Hospital in its various departments.—*Bulletin Jackson County Med. Soc.*



## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1920

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Webster County Medical Society, Dec. 1, 1919.  
Madison County Medical Society, Dec. 2, 1919.  
Livingston County Medical Society, Dec. 31, 1919.  
Schuyler County Medical Society, Jan. 9, 1920.  
Benton County Medical Society, Jan. 23, 1920.  
Camden County Medical Society, Jan. 28, 1920.  
Linn County Medical Society, Feb. 24, 1920.  
Ralls County Medical Society, March 8, 1920.  
Ste. Genevieve County Medical Society, March 17, 1920.  
Atchison County Medical Society, March 26, 1920.  
Chariton County Medical Society, April 6, 1920.  
Cass County Medical Society, April 7, 1920.  
Clinton County Medical Society, June 15, 1920.

### MACON COUNTY MEDICAL SOCIETY

The Macon County Medical Society met in the office of the secretary, Dr. A. B. Miller, Macon, Tuesday afternoon, October 12, and discussed the following program:

The Significance of Hoarseness, by Dr. Welch.  
The Significance of Fainting, by Dr. W. H. Miller.  
The Significance of Tremor, by Dr. Hunt.  
The Significance of Coma, by Dr. Gronoway.

The program follows the plan of and is taken from the Cabot Clinic. It is very practical, stimulates study and awakens interest. We have been using the Clinics of the Massachusetts General Hospital which we also find both interesting and helpful.

A. B. MILLER, M.D., Secretary.

## BOOK REVIEWS

**DISEASES OF CHILDREN.** By John Lovett Morse, A.M., M.D.; Presented in 200 case histories of actual patients selected to illustrate the diagnosis, prognosis and treatment of the diseases of infancy and childhood, with an introductory section on the normal development and physical examination of infants and children; Professor of Pediatrics, Harvard Medical School; etc. Third edition. Boston: W. M. Leonard, Publisher, 1920.

This book is a standard treatise on diseases of children, presenting the subject by case illustration. The cases are well grouped, as follows: Normal Development and Physical Examination of Infants and Children; Diseases of the New Born; Diseases of Gastroenteric Tract; Diseases of Nutrition; Specific Infectious Diseases; Diseases of Nose, Throat, Ears and Larynx; Diseases of Bronchi, Lungs and Pleura; Diseases of the Heart and Pericardium; Diseases of the Liver; Diseases of Kidneys and Bladder; Diseases of the Blood; Diseases of the Nervous System; Unclassified Diseases.

The discussions of the cases are excellent, especially in reference to the differential diagnosis.

The physicians who are familiar with former editions will receive this book with enthusiasm. J. P. C.

**THE DUODENAL TUBE AND ITS POSSIBILITIES.** By Max Einhorn, M.D., Professor of Medicine at the New York Post-Graduate Medical School; Visiting Physician to the Lenox Hill Hospital, New York City. Octavo of 122 pages with 51 illustrations. Philadel-

phia and London: W. B. Saunders Company, 1920. Cloth, \$2.50 net.

This is an excellent little book, describing briefly and concisely the various methods of reaching the duodenum, or even farther into the small intestines; also the instruments, chiefly the duodenal tube and its modifications as devised by the author himself, for obtaining the secretions for examination. The use of instruments as a therapeutic measure, chiefly dilating the pylorus, duodenal feeding, duodenal lavage and medication, is thoroughly described. Brief mention is made of the thread test, duodenal bucket, duodenal catheter, etc.

The author is a pioneer in this field and the result of an enormous amount of work done by him is condensed in brief, compact, didactic style. Brief as it is, it covers all the work done and the results so far accomplished.

There is much of value in this book and it is to be recommended to every physician doing gastrointestinal work. L. E. P.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1920, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**SODIUM ARSPHENAMINE.**—Sodium Arsenphenolamine.—The sodium salt of 3-diamino-4-dihydroxy-1-arsenobenzene with a stabilizing medium. The arsenic content of three parts of sodium arspenamine is equivalent to two parts of arspenamine. Sodium arspenamine has the same actions and uses as those of arspenamine; its advantage over arspenamine is that it does not require addition of alkali before use. To prepare the solution the sodium arspenamine is added to the required amount of sterile water and dissolved by gentle agitation.

**SODIUM DIARSENOL.**—A brand of sodium arspenamine. Sodium diarsenol is marketed in ampules containing 0.15 Gm., 0.3 Gm., 0.45 Gm., 0.6 Gm., 0.75 Gm., and 0.9 Gm., respectively. Diarsenol Laboratories, Inc., Buffalo, N. Y.

**CORPUS LUTEUM TABLETS—ARMOUR 5 GRAIN.**—Each tablet contains 5 grains of desiccated corpus luteum—Armour (see New and Nonofficial Remedies, 1920, p. 203) (*Jour. A. M. A.*, Sept. 18, 1920, p. 815).

### PROPAGANDA FOR REFORM

**MORE MISBRANDED NOSTRUMS AND DRUG PRODUCTS.**—The following products have been the subject of prosecution under the federal Food and Drugs Act: Beecham's Pills were held misbranded because the curative claims made for them were false and fraudulent, and because the pills were not made in England as claimed. Pike's Liver, Kidney and Stomach Remedy, because the therapeutic claims were false and fraudulent. Ergot Apol Compound (Evans Drug Co.), because the capsules did not contain the claimed amounts of drugs and because they were an imitation. Prescription 1000, sold in two forms, a copaiba preparation for internal use and a dilute potassium permanganate solution for external use, was sold under false and fraudulent therapeutic claims. Rival Herb Tablets were tablets falsely claimed to be chocolate coated and sold under false and fraudulent

therapeutic claims. Wilson's Solution Anti-Flu consisted essentially of oil of eucalyptus, methyl salicylate and thymol or oil of thyme, and was falsely claimed to be effective as a remedy for influenza, colds and grippe. Castor Oil Capsules (Evans Drug Co.), did not contain the amount of drug claimed (*Jour. A. M. A.*, Sept. 4, 1920, p. 690).

**PREVENTION OF GOITER.**—The latest report on the prevention of goiter by administration of sodium iodid by Marine and Kimball—an investigation carried out under a grant from the Therapeutic Research Committee of the Council on Pharmacy and Chemistry—indicates a striking difference between those girls not taking and those taking iodine. The difference is manifested both in the prevention of enlargement and in a decrease in the size of existing enlargements. Of 2,190 pupils taking 2 gm. of sodium iodid twice yearly, five have shown enlargement of the thyroid, while of 2,305 pupils not taking the prophylactic, 495 have shown enlargement of the thyroid. Of 1,182 pupils with thyroid enlargement at the first examination who took the prophylactic, 773 thyroids decreased in size, while of 1,048 pupils with thyroid enlargement at the first examination who did not take the prophylactic, 145 thyroids decreased in size (*Jour. A. M. A.*, Sept. 4, 1920, p. 674).

**USING UNFIT ETHER.**—In the case of Moehlenbrock versus Parke, Davis and Company et al., the Supreme Court of Minnesota denied the surgeons who had administered the ether a new trial, after a verdict had been entered against both the manufacturer and the surgeons. The Supreme Court holds that for the death which resulted from the use of the unfit ether both the manufacturer and the surgeons were responsible. The surgeons were held to be negligent in administering to a patient ether that was unfit for use and in their care after the ether was administered (*Jour. A. M. A.*, Sept. 11, 1920, p. 763).

**LYKO.**—This is an alcoholic tonic which has been widely advertised in the newspapers. It is put out by the Lyko Medicine Co., Kansas City, Mo. Lyko is claimed to stimulate the appetite, tone up the digestive organs and to have laxative qualities. It is said to contain caffeine, kola, phenolphthalein and cascara sagrada. The advertising does not discuss the most powerful ingredient, alcohol, although the label declares the presence of 23 per cent. of this drug. As a result of an exhaustive examination, the A. M. A. Laboratory concludes that Lyko is essentially a sweetened solution containing about 22.2 per cent. of alcohol together with insignificant amounts of caffeine, cascara extractives and phenolphthalein. There was no evidence to show that the product is sufficiently medicated to prevent its being used as a beverage (*Jour. A. M. A.*, Sept. 11, 1920, p. 757).

**NATURE'S CREATION.**—This is one of the fake consumption cures. It was originally put on the market as an absolute cure for syphilis. When analyzed in the A. M. A. Laboratory it was found to be essentially a solution of potassium iodid in a weakly alcoholic medium containing vegetable extractives and flavoring matter, and small quantities of inorganic salts (*Jour. A. M. A.*, Sept. 11, 1920, p. 758).

**IODEX, A MISBRANDED IODINE OINTMENT.**—(1) Claim: 5 per cent. iodine. Finding: iodine content only about 3 per cent. (2) Claim: free iodine. Finding: no free iodine. (3) Claim: absorbed through the skin, iodine can be found in urine 30 minutes after inunction. Finding: the assertion that iodine can be found in the urine after Iodex has been rubbed on the skin has been experimentally disproved. The preceding is taken from a poster of the A. M. A. Chemical Laboratory at the A. M. A. New Orleans meeting (*Jour. A. M. A.*, Sept. 18, 1920, p. 830).

**DIABETIC FOODS.**—A report from the Connecticut Agricultural Experiment Station on diabetic foods includes not only the content of carbohydrate in these products but also that of protein and fat in view of the recognized necessity of taking into account all of the nutrients in any proper formulation of regimen for the diabetic patient. There is no satisfactory definition of what a diabetic food is, nor is there any universal diabetic food. The value of accurate information regarding the makeup of such products as may find special application in the dietotherapy, such as given in the Connecticut report, lies in the fact that it enables clinicians and the patient to proceed intelligently in the direction of diet planning with a view to tolerance of all the nutrients. Of particular interest in the report are the analyses of bran, which is being widely used at present to give bulk to the food residues in the alimentary canal. It appears that common, unwashed bran frequently contains no more than half as much starch as some of the advertised brands of "health" bran (*Jour. A. M. A.*, Sept. 18, 1920, p. 818).

**CALCIDIN TABLETS—ABBOTT.**—Calcidin is claimed to be a mixture of iodine, lime and starch. In contact with water, the iodine and lime react to form calcium iodid and calcium iodate. By the acid of the gastric juice, the calcium iodid and calcium iodate are decomposed with liberation of free iodine. The administration of calcidin tablets amounts to giving free (elementary) iodine. The effects produced by the administration of free iodine appear not to differ from those produced by the administration of iodids, and, therefore, calcidin has no advantage over the iodids, such as sodium iodid (*Jour. A. M. A.*, Sept. 25, 1920, p. 892).

**SOME MISBRANDED VENEREAL NOSTRUMS.**—The following preparations have been the subject of prosecution by the federal authorities under the Food and Drugs Act on the ground that the therapeutic claims which were made for them were false and fraudulent: Injection Cadet (E. Fougere and Co., New York), a dilute watery solution of copper sulphate and unidentified plant material. Knoxit Injection (Beggs Manufacturing Co., Chicago), a solution of zinc acetate with alkaloids of hydrastis, in glycerin and water. Knoxit Liquid, a solution of zinc acetate with alkaloids of hydrastis, in glycerin and water. Knoxit Globules, essentially a mixture of volatile and fixed oils and oleoresins, including copaiba balsam, cinnamon and cassia. Grimault's Injection (E. Fougere and Co., New York), a weak watery solution of copper sulphate and plant extractives, probably matico. Halz Injection (Edw. Price Chemical Co., Kansas City, Mo.), consisting essentially of zinc sulphate, boric acid, glycerin, traces of alum and formaldehyd and water. Tablets which seem to go with the product consisted essentially of calcium and magnesium carbonates, copaiba, a laxative plant drug, plant extractives, a small amount of an unidentified alkaloid, sugar and starch. Noxit (Frederick F. Ingram Co., Detroit), consisting essentially of opium, berberine, a zinc salt, glycerin, alcohol and water. Crossmann Mixture (Wright's Indian Vegetable Pill Co., New York City), essentially an alcoholic solution of volatile oils, including balsam copaiba and cubebs. Santal-Pearls (S. Pfeiffer Mfg. Co., St. Louis), consisting essentially of a cinnamon-flavored mixture of santal oil and copaiba. Cu-Co-Ba-Tarrant (Tarrant Co., New York City), consisting essentially of a mixture of extract of cubebs and copaiba with magnesium oxid. Hygienic and Preservative Brou's Injection (E. Fougere and Co.), consisting essentially of acetates and sulphates of zinc and lead, morphin, water and a very small amount of alcohol (*Jour. A. M. A.*, Sept. 25, 1920, p. 891).



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### ORIGINAL ARTICLES

#### TRAUMATIC ANEURYSMS\*

H. S. VALENTINE, M.D.  
KANSAS CITY, MO.

An aneurysm may occur after any injury to a blood vessel. It is less frequent after severe injury, such as complete division of a vessel, than after an injury which only bruises or makes a small perforation in the vessel wall.

All traumatic aneurysms are of the so-called "false aneurysm" type. That is, there is a solution of the continuity of the vessel wall, and the wall of the aneurysmal sac is not formed by any of the coats of the vessel. It may happen that the vessel wall is injured and the resulting scar stretches and finally gives way. This is not the common way in which traumatic aneurysms form. Usually there is an opening in the vessel wall and the blood escapes into the surrounding tissues. At the periphery, fibrin is deposited and a blood clot forms. This causes a thickening of the perivascular tissues and the formation of a sac results. If the opening into the vessel is not closed by the clot the blood continues to pour into the center of the sac, producing a pulsating tumor. The sac thus formed may be weak and rupture so that blood escapes beyond its confines. When the surrounding tissues are firm enough a second sac results which communicates with the first one.

The following case illustrates this (reported through courtesy of Dr. J. F. Binnie):

A male, 47 years of age, was examined Dec. 6, 1919. He gave the following history: Twenty-seven years ago he was shot with a 38-caliber revolver. The wound of entrance was on the inner side of the middle of the thigh. The wound of exit was further back on the outer side. The bullet passed behind the femur and did not injure it. The wound healed. Twelve years after injury he occasionally had cramps of the calf muscles, which interfered with walking. A painless, pulsating tumor near the wound of entrance was noticed. Four years ago he could not walk without crutches for thirty days because of cramping. Two

months before being first seen he had a severe attack of cramps in leg, which became progressively worse for ten days. The tumor was exposed at this time, was found to be an aneurysm and the wound closed. Physical examination revealed a firm pulsating tumor  $2\frac{1}{2}$  inches by  $3\frac{1}{2}$  inches immediately under the skin to the inner side of the left thigh. The lower end of the tumor was three inches above the upper edge of the patella. The posterior tibial pulse was good. The left great toe had a red blush, but was not tender. The second, third and fourth toes were purplish and the second toe was tender. There was no edema of foot or leg. Sensation was normal. The nourishment of limb was good, except in the toes. Operation Dec. 15, 1919. Elastic constriction above the tumor. A longitudinal incision was made over the tumor and was carried down to it through a thin layer of muscle. The tumor was opened. The upper end contained a soft clot, evidently the result of a recent hemorrhage. The rest of the tumor consisted of two cavities, communicating with each other and almost filled with a hard, brownish-black deposit. The cavities were cleaned. In the lower cavity was an opening about one-third inch in diameter which led into the superficial femoral artery. The opening was closed with fine chromic catgut. Part of the sac wall was removed and the cavities were obliterated. The wound was closed without a drain.

March 13, 1920, the color in toes is good. The second and third toes are slightly swollen. The post-tibial pulse is present. There are no areas of anesthesia. He has some pain in anterior arch probably due to a metatarsalgia. He is able to carry on his work, that of farming. It is important to note the history of severe pain on two occasions. The last attack was especially severe. These attacks of pain probably were due to rupture of the aneurysmal sac with hemorrhages which caused the formation of secondary sacs.

The injury may have done damage to both the artery and its companion vein which resulted in a communication being established between them. Such a condition is known as an arteriovenous aneurysm. When the connection between the vessels is a direct one it is called an aneurysmal varix. When there is a sac intervening between the artery and vein then it is termed a varicose aneurysm.

The size of any aneurysm may vary from time to time. This may depend largely on its location. For instance, a vessel surrounded by dense fascial planes at the site of injury has less room to expand than if the injury has occurred in loose areolar tissue. The time after injury is also a factor as the tendency of all

\* Read at the Sixty-Third Annual Meeting of the Missouri State Medical Association, Jefferson City, April 6-8, 1920.

aneurysms is to increase in size constantly. The larger the injured vessel the larger is the aneurysm, as a rule, although there are many exceptions to this.

Statistics as to the location of aneurysms and the arteries involved vary greatly in different series. Eccles<sup>1</sup> has analyzed fifty cases of traumatic aneurysms following gunshot wounds received in war and found that thirty of these were arterial and twenty were arterio-venous. As regards position; seven occurred in the head and neck, fourteen in the upper limb, and twenty-nine in the lower extremity.

The popliteal artery was involved most often, thirteen times. The superficial femoral was injured eight times, the posterior tibial, axillary and brachial, five times each. The mortality was 8 per cent. He attributes the small number of aneurysms found in the neck and head to the fact that in such cases other important structures have been damaged, causing death within a short time. The popliteal suffered more than any other vessel. This, he thinks, is due to two factors: (1) because of the frequency of gunshot wounds of the lower extremity with recovery; (2) because the popliteal artery is embedded in fatty tissue which gives it little support.

The clinical symptoms which accompany aneurysm are many. The cardinal sign of an aneurysm is that of a tumor which pulsates and tends to expand in all directions synchronously with the heart beat and which is quieted when pressure is made over the main vessel. An abscess near a vessel may pulsate but it will not expand as does the aneurysm.

A systolic bruit may be heard over the aneurysm which is transmitted toward the periphery along the course of the artery. In arterio-venous aneurysm a to and fro murmur may be heard. It is transmitted centrally along the vein and peripherally along the artery. Local murmurs may not only be transmitted along the vein and artery near the aneurysm but they may be conducted to the heart. It is well to remember, in the examination of a patient who has injuries to the extremities and who has a systolic precordial murmur, that this murmur may be due to an aneurysm. It would seem that murmurs would be transmitted to the heart more often in aneurysms of the neck or upper extremity than in aneurysms of the lower extremity. But this is not the case. Makins<sup>2</sup> found, in a series of twenty-four cases of axillary aneurysms, that the murmur could be heard over the heart in six. In only one case of arterial aneurysm of the neck or arm did this occur, while in ninety-four cases of arterial aneurysm of the lower extremity the systolic murmur was transmitted to the heart thirty-

one times. The reason for this is hard to explain. Makins thinks it may be due to the straight course which the vessels of the lower extremity take to the heart as compared to that of the vessels of the upper extremity. Also the vessels of the neck and arm suddenly become smaller as they leave the great trunks of the chest, while the vessels of the lower extremity gradually decrease in size as they reach the periphery.

A thrill is felt in arterio-venous aneurysm, especially over the veins during systole. This thrill at times may be felt over the entire limb and gives a sensation similar to that of the purring of a cat. The veins near the injury are more distended than in simple aneurysm.

Couteaud<sup>3</sup> examines the pulse proximal to the injury. He has found in injuries to the blood vessels that invariably the pulse proximal to the injury has been absent or diminished as compared with the similar pulse of the opposite side. This test has proven of great value in making a diagnosis of injury to a blood vessel. When the subclavian pulse is diminished in a case of upper arm wound the surgeon ought to look for a lesion of the principal artery of the limb even though the radial pulse is present.

Makins<sup>4</sup> has found, in cases of traumatic aneurysms of recent development, a fall in blood pressure in the affected limb. In twenty-three cases the difference in the peripheral blood pressure between the wounded and injured extremity amounted to 21.4 mm. of mercury.

The symptoms which may be produced by pressure of the aneurysm on surrounding structures are legion and it would be useless to attempt to enumerate all of them. Edema of the extremity is common and is most severe when pressure is made on the large veins.

Nearby bones may be eroded by pressure from the aneurysm. An example of this is shown in the following case, which is reported by courtesy of Dr. J. F. Binnie.

A farmer 50 years of age was shot by a navy revolver twenty years before he was first seen. The wound of entrance was in the abdomen below the tip of the left sixth rib. The wound of exit was 1½ inches to left of spine, immediately below twelfth rib. Since then he had almost constant vague pains in both loins and hypochondriac regions, occasionally radiating to both subscapular regions. These vague pains were sometimes varied by acute attacks in the same regions, but most marked in the left side. A pulsating mass was first noticed seven weeks before the patient was seen.

Pain was very severe in left thigh and groin with consequent inability to move left limb. Examination of patient showed a pulsating, tender mass, from rib line to pelvis and from the outer edge of the left rectus to spine. Percussion note was dull. Heart examination was negative. The femoral pulses were synchronous with each other. There was no thrill felt over the mass, but a faint bruit was present. There

1. Eccles: *Am. J. Surg.*, 1916, 30: 33.

2. Makins: *Gunshot Injuries to the Blood Vessels*, 1919, p. 54.

3. Couteaud: *Bull. et mém. Soc. d. chir. d. Par.*, 1920, 46: 254.

4. Makins: *Gunshot Injuries to the Blood Vessels*, 1919, p. 41.



was general emaciation. An incision was made through the outer edge of the left rectus and the abdomen opened. A retroperitoneal pulsating tumor was found which appeared to be distinct from the aorta. The upper end of the mass extended to the diaphragm. A diagnosis was made of aneurysm of the aorta or left renal artery. The abdomen was closed. Nine days after the operation the patient complained of burning pain in the left hip. A few hours later he suddenly died. An autopsy revealed a false aneurysm of the aorta. An old opening about  $1\frac{1}{2}$  inches in diameter was found in the posterior wall of the aorta, opposite the twelfth dorsal and first lumbar vertebrae. The bodies of these two vertebrae were almost entirely gone, leaving the rough surfaces of bone in direct contact with the blood. From this point the blood burrowed a huge cavity in the left psoas muscle, going as far downward as the crest of the ilium. The blood had burrowed upward to the diaphragm and had ruptured into the pleural cavity. The left pleural cavity contained about one gallon of blood.

Gangrene is not an uncommon complication of aneurysm. It occurs less frequently in traumatic than in pathological aneurysm. Pearson<sup>5</sup> reports ten cases of traumatic aneurysm with no gangrene. His patients were young men with healthy blood vessels and collateral circulation was easily established.

It must not be forgotten that nerve symptoms may not be due to the aneurysm but that nerve structures may also have been injured. Burrows<sup>6</sup> has made some interesting observations following injuries to the blood vessels, which have been accompanied with serious symptoms referable to the nerves, yet no lesions to the nerves were found which could explain these symptoms. For this condition he has used the general term "angiotic paralysis."

Cases with a complete obstruction of the artery have presented a constant chain of symptoms. The patient complains of "pins and needles" in the affected member. A paralysis has existed in which the muscles have been hard and have felt elastic. There has been anesthesia of the glove and stocking type. Following incomplete obstruction of the vessels there has been a widespread loss of cutaneous sensibility extending above the site of injury. The muscles of the part are paralyzed but are flaccid. The patient does not suffer from the sensation of "pins and needles." Burrows admits that the pathology is obscure. An ischemia, similar to that found in Volkmann's paralysis, will explain some cases. Interference to the sympathetic nerve supply to the vessel might explain others. No explanation holds good at all times. Because of these nerve symptoms he warns against ligation of a main vessel if it can be avoided.

After ligation of a vessel it has been believed that the vessel collapses above and below to the first collateral branch, and finally becomes a fibrous cord. Lerische and Poligard<sup>7</sup> have

made many observations which disprove this. They have found that the vessel after ligation decreases greatly in size above and below to the first collateral, but that it still remains patent and has a function. The vessel nourishes a small area around it. It has merely diminished in size because its work has become less. They call attention to the fact that division of the sympathetic nerve supply on the artery has been done in some cases with relief from these nerve symptoms but that it is reasonable to suppose, since the vessels remain patent, that an end to end anastomosis of the artery would give better results and that in time the small vessel would enlarge and properly take care of its added work.

Septic and ascending thrombi are common complications of traumatic aneurysm. The following tragic case of arterio-venous aneurysm was admitted to Base Hospital No. 28 in France on Nov. 9, 1918:

Examination showed a gun shot wound of the left thigh with a compound fracture of the femur. The wound was infected and cultures taken on admission showed staphylococci and gram-negative bacilli. There was an arterio-venous aneurysm in the popliteal space. Four days after arrival in hospital there was a very severe hemorrhage from rupture of the aneurysm. The thigh was amputated in its lower third. Examination of the amputated leg showed a ruptured arterio-venous aneurysm about the size of a pigeon's egg. On the day following operation the patient suddenly became very weak, pale and short of breath. He died a few minutes later, apparently from pulmonary embolism. At autopsy the heart was found dilated and was filled with clotted blood. The left pulmonary artery was plugged with an antemortem clot. The muscles of the thigh had a mushy consistency resembling autolyzed tissues prepared for culture media. Along the femoral vessels was a deposit of gelatinous material. Bacilli Welchii were isolated from cultures taken from the left thigh, the pulmonary embolus, the spleen and the heart's blood.

There is a difference of opinion as to the time when repair of an aneurysm should be attempted. Gregoire<sup>8</sup> thinks that sufficient time should be given for a permanent anastomosis to take place, that is, from fifty to sixty days should elapse before an operation is done. Contrary to this opinion is that of Leschelier<sup>9</sup> who reports ten cases of arterio-venous aneurysm between the internal jugular and common carotid, which were operated on early with success. He thinks that it is wise to operate on these cases as soon after injury as the dangers from asphyxia, fatal hemorrhage and the accidents of septic and ascending thrombi are diminished. There may be good reason for doing either a late or early operation, depending on circumstances. The greatest danger in operation is when one attempts a repair which is too late for an early operation or too early for a late operation. If the case is seen very soon after injury and débridement of the wound

5. Pearson: Brit. M. J., 1916, 2: 796.

6. Burrows: Brit. M. J., 1918, 1: 199.

7. Lerische et Poligard: Bull. et mém. Soc. d. chir. d. Par., 1920, 46: 142.

8. Gregoire: Am. J. Surg., 1919, 33: 241.

9. Leschelier: Theses d. Lyon la Pr. Med., 1920, 27: 72.

can be done while the vessels are still nearly normal and before infection has made headway, then an early operation is advisable. If however the case is not seen until the wound has become infected, then it would be folly to operate until the infection has disappeared and the collateral circulation has been well established.

An X ray examination should be made before any plastic work is attempted on an aneurysm following a war wound because of the possibility of the presence of foreign bodies.

Before operation is undertaken for an aneurysm of the extremities, tests should be made to ascertain if the collateral circulation has been sufficiently established to nourish the member below the site of injury. Various methods have been devised for this test but that of Matas<sup>10</sup> is most reliable and simple. A complete ischemia of the limb below the aneurysm is obtained by the application of an Esmarch elastic bandage. Sufficient compression of the main vessel is now made to completely still the aneurysm. The elastic bandage is kept in position for ten minutes in young patients and for five or six minutes in the aged; it is then removed while the main artery is still occluded. Immediately a hyperemic blush returns to the extremity if the collateral circulation has been well established.

The classical operation for aneurysm has been ligation of the vessels. This has been done in different ways. The oldest operation is that of Antyllus. Other operations are those of Anel, Brascher, Hunter, etc. Ligation has also been the classical operation in treatment of arterio-venous aneurysm in times past as well as simple aneurysm. Ligation of the artery alone, or of both artery and vein, with or without excision of the sac, has been done. Gregoire<sup>8</sup> believes that in the treatment of arterio-venous aneurysm vessel suture should be attempted more and more, rather than quadruple ligation with or without extirpation of the sac. He mentions that in 1914-1915 (*Bull. Soc. d. Chir. d. Paris*) twenty-two cases of arterio-venous aneurysm were reported and that there was not one case of arterial suture. In 1918 thirteen cases were published in five of which arterial circulation was re-established. While he advises that attempts should be made to restore the circulation, especially in the artery, yet there are indications when quadruple ligation should be done; for instance in vessels of the second order and when adhesions exist so that dissection is difficult. This last indication should be met with less frequently as surgical technic proves.

Chevrier for Dambrin has reported six cases of arterio-venous aneurysm which were successfully treated by extirpation after quadruple ligation. Dambrin<sup>11</sup> found that in some cases

nerve filaments were enclosed in the sac wall, producing pain. He thinks in these cases extirpation is the operation of election.

For the repair of vessels the best suture material is fine silk which has been passed through sterile vaseline. It should be threaded on the finest of round needles. Numerous types of sutures have been devised to repair the vessel so that its function may be restored. The principle in these has been to bring surfaces of intima together and not to bring the suture material in contact with the blood stream. It is well to have the exposed ends of the vessels coated with vaseline. Bunell<sup>12</sup> does not believe in this. He thinks that the presence of petrolatum increases the flow of serum and encourages infection. Instead, he washes the vessels with a one per cent solution of potassium citrate and keeps the field of operation moist with it while operating.

It should be remembered that in ligating a vessel care must be used not to injure the vessel wall. If the continuity of the media and intima is broken there results a weakness which predisposes to the formation of another aneurysm. Ballance and Edmunds<sup>13</sup> carried out several experiments to determine how much force could be used to constrict the vessel and still not do damage. They have recommended that two ligatures be placed around the vessel side by side. In each the first loop of a reef or surgical knot is loosely made in the same direction. The two ends of the ligatures on either side of the vessel are grasped and tightened at the same time so that one ligature does not act independently of the other. The knot is completed by tying the two ends of one side to the two of the other side. They are not tied separately as is done in placing the first loop. In the treatment of arterio-venous aneurysm the question may arise as to whether both artery and vein should be ligated. Makins<sup>14</sup> has somewhat upset the generally accepted idea that ligation of the main artery and vein is more dangerous than ligation of the artery alone. In a very large number of gunshot injuries in which both vein and artery have been involved, gangrene has not occurred more frequently than when only the artery was occluded. In fact, the evidence points the other way—that when the vein and artery are both injured there is an added safety.

During the South African War some statistics compiled by Surgeon General W. F. Stevenson showed that gangrene of the limb occurred in 50 per cent of the cases of arterio-venous aneurysms of the femoral in which proximal ligation of the artery was done. Makins gives a plausible explanation for this. The arterial

12. Bunell: J. A. M. A., 1919, 73: 905.

13. Ballance and Edmunds: Cheyne-Burghart Surgical Treatment, 1912, 2: 176.

14. Makins: Gunshot Injuries to the Blood Vessels, 1919, p. 101.

10. Matas: J. A. M. A., 1914, 63: 1441.

11. Dambrin: (Rapport de Chevrier) Bull. et mém. Soc. d. chir. d. Par., 1920, 46: 11.



pressure of a limb is greatly diminished after ligation of the artery. The limb is nourished by means of the collateral circulation. The blood passes backward toward the heart through the channels of least resistance, namely, the large veins, without entering the peripheral circulation, thus the limb practically bleeds into its own large veins. It is evident that the collateral circulation is more apt to be evenly maintained if the vessels, both arterial and venous, are the same size.

W. A. Oppel is quoted as having done ligation of the popliteal vein for senile gangrene of the foot with excellent results. In a series of 101 cases in which the artery alone was ligated it was found that gangrene occurred in 28 per cent. of the cases. In 71 cases in which artery and vein were ligated, gangrene followed in only 19.7 per cent. of the cases.

The practice in the British Army in France since 1917 has been to ligate both vessels. Some interesting experiments made by Major Hamilton Drummond are quoted. Major Drummond did the following operation six times in cats:

A loop of ileum near the cecum was drawn out of the abdomen and all the visible arteries and veins supplying about five inches of the intestine were ligated. The intestine was replaced in the abdomen. About six inches higher up another segment of five inches of intestine was removed from the abdominal cavity and all its arteries were ligated. In four of the six cases it was proved that there was greater damage done to the segment of intestine in which the artery was ligated than in the segment where both vein and artery were ligated. In no case was the reverse true.

The best ligature material is that which is absorbable and pliable. Silk and catgut best meet these requirements. Silk has the advantage that the knot does not slip easily. In tying the larger vessels, chromicized catgut is perhaps better than plain catgut, as it is desirable not to have the ligature quickly absorbed. Harold Neuhoff will publish before long a report of some cases in which he has been successful in curing traumatic aneurysm by patching the vessels with free transplants of fascia.

Herrick<sup>15</sup> has done some experimental work in animals which may prove to be of value in the treatment of aneurysm. He has made several experiments in which fascia inserts have been placed in large blood vessels with the result that no clotting has taken place. None of his cases have shown any symptoms of embolism. It was found that a patch of muscle fascia could be placed in the artery of the dog without impairing its function. By means of these inserts he was able to diminish the size of the artery. He comes to the conclusion that such an operation may be of use to decrease the orifice in sacciform aneurysms.

Tuffier<sup>16</sup> has treated successfully an aneu-

rysm of the aorta by "fibrous cerclage." Strips of fascia lata were wrapped around the vessel in two layers; each layer was fixed by silk sutures. Enough tension was made to narrow the caliber of the aorta. After five years no severe functional trouble had arisen.

Macewen<sup>17</sup> has introduced long-pointed, tempered steel pins in the aneurysmal sac so the points of the pins just touch the opposite side. He then gently scarifies the wall. The roughened surface thus produced causes a deposit of blood clot. He has apparently cured some cases by this method and has had improvement in others.

The reconstructive operation of Matas<sup>18</sup> for the cure of saccular aneurysms is being used more and more. It is supplanting the old classical operation of ligation. It has the advantage that it is safe, does little damage to the circulation, and gives immediate relief from pressure symptoms due to the contents of the sac. His method may be used any place where temporary control of the main artery can be had, hence is easily applied in aneurysms occurring in the extremities. The principle of the operation depends on the fact that the aneurysmal sac is lined with endothelium which is continuous with that of the artery so that by bringing the endothelial surfaces together at the mouth of the orifice union takes place and the continuity of the intima of the vessel is maintained.

The procedure in the operation of Matas is, first, the main vessel must be controlled by the application of an Esmarch bandage, a tourniquet, or direct pressure, used on the artery by means of some padded clamp. After the pulsation in the aneurysm is stilled, the sac is exposed by a free incision which runs parallel with the long axis of the sac. The sac is then opened and explored and the type of aneurysm is determined.

In sacciform aneurysm, which is the common type found after trauma, a single orifice is found. Here the purpose of the suture is not only to obliterate the opening between the sac and vessel, but also to restore the continuity of the arterial wall. The best type of needle is a small round needle similar to those used in intestinal work. Vaseline silk should be used for suture. Care should be taken that the needle does not enter the artery and that the size of the vessel is not changed when the sutures are tightened. The sac is then obliterated by using running sutures. The circulation of the sac must not be interfered with and no dead spaces left. A sterile gauze dressing is applied and the entire limb is wrapped in cotton-batting and immobilized by splints.

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15. Herrick: J. A. M. A., 1918, 71: 2121.

16. Tuffier: Bull. et mém. Soc. d. chir. d. Par., 1920, 46: 166.

17. Macewen: Cheyne-Burghart Surgical Treatment, 1912, 2: 187.

18. Matas: Tr. Am. Surg. A., 1902, 20: 396.

# CHRONIC DACRIOCYSTITIS TREATED BY CURETTAGE AND RAPID DILATATION\*

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Chronic dacriocystitis has always been recognized as a stubborn disease for the relief of which a variety of therapeutic methods, medical and surgical, have been proposed and practiced. It is not my purpose to describe these various methods; I wish merely to allude to them and to state briefly what I consider to be their several drawbacks.

1. *Syringing the sac with antiseptic and astringent solutions.*—This method is useful preparatory to dilatation of the duct. My colleague, Dr. W. H. Luedde (personal communication) believes that antiseptic treatment of the sac persisted in until the sac contents are no longer purulent, should always precede the use of probes. In his opinion one of the principal reasons why small probes so often fail to re-establish patency is that probing is resorted to prior to antiseptic treatment. Crisp<sup>1</sup> has obtained good results by thoroughly slitting the canaliculus back to the internal canthus. He believes that, in some cases, free drainage of the sac is interfered with by some anatomic barrier in the canaliculus and that by dividing this barrier (without probing the duct) a cure may be effected.

2. *Probing.*—Another reason for the failure of probes (Bowman's for instance) to effect a cure lies in the disproportion between the diameter of the largest of these (less than 2 mm.) and the actual diameter of the lacrimonasal canal (over 4 mm.). Furthermore, probing is very painful, requires frequent repetition and even though persisted in for months or years does not always insure permanent patency of the duct or the cessation of pus formation in the sac.

3. *Cannulae.*—These are little tubes, usually made of gold, which are inserted into the lacrimonasal canal after preliminary dilatation. They are intended to be worn permanently. Cannulae have fallen into disuse for it was found that the lumen frequently filled with mucous, thus impeding drainage.

4. *Styles.*—These are solid rods of gold, silver, nickel, lead or fuse wire, shaped to conform to the contour of the duct and worn for a long period. They have found favor with some ophthalmologists. In my experience, styles are not always well tolerated. Moreover, there is a tendency for the duct to narrow after the style has been removed.

5. *Large probes.*—Theobald<sup>2</sup> was the first to show that there existed a disproportion between the diameter of probes ordinarily used and the diameter of the nasal duct. He constructed much larger probes, his largest (No. 16) being 4 mm. in diameter. He demonstrated that in most cases a gradual dilatation of the duct up to nearly 4 mm. could be effected with associated cure of the dacriocystitis. To overcome the one great drawback to this method, namely, the time required to secure permanent patency, Ziegler<sup>3</sup> proposed rapid dilatation at one sitting, using large angled probes of special design. Both of these methods gained many followers and in my opinion marked a distinct advance in the treatment of this disease.

6. *Extirpation or destruction of the sac.*—This method has the advantage of doing away once and for all with the pus secreting membrane, and remains even today the method of last resort. Almost always there remains some stilloidum and unless every shred of mucosa is removed or destroyed there will be a recurrence of pus. The operation has never appealed to me on the general surgical principle that no organ should be destroyed if any less radical measure will suffice to effect a cure.

7. *The endonasal operation on the sac and duct.*—This operation aims to create a permanent artificial pathway for the sac secretions into the nasal cavity. A variety of endonasal operations have been proposed. When successful these operations leave little to be desired, but in all of them the danger of secondary closure of the nasal opening, thus nullifying the primary good result, is very great.

The train of pathologic events leading to inflammation of the tear sac has never been established with certainty. The most widely accepted belief is that the mucosa of the duct becomes inflamed by extension upward of a chronic nasal inflammation, and that in the course of time scar tissue forms which narrows or blocks the canal. In 1918 Thompson<sup>4</sup> advanced the idea that a foreign body entering the lacrimonasal canal through the canaliculus was the primary cause of the disease. He contended that such a foreign body lodging on a fold of mucous membrane would cause irritation and erosion of the surrounding structures, would increase in size by the deposition of lime salts derived from the tears and serum and would thus eventually block the canal. He therefore proposed the removal of the obstructing mass by "curettage."

Whether we accept Thompson's theory or not we must assume that in dacriocystitis the mucous membrane of the sac and duct is chronically inflamed and hence presents the usual

\* Read at the Sixty-Third Annual Meeting of the Missouri State Medical Association, Jefferson City, April 6-8, 1920.

1. Crisp: Tr. Am. Acad. Ophth. & Oto-Laryng., 1917-1918, p. 388.

2. Theobald: Tr. Med. & Chir. Fac., Maryland, 1877, p. 154.

3. Ziegler: J. A. M. A., 54:2026 (June 18) 1910.

4. Thompson: J. A. M. A. 71:1727 (Nov. 23) 1918.



products of chronic inflammation — ulcers, polypi and granulation tissue. It may even be, as stated by Fergus,<sup>5</sup> that the essence of dacryocystitis is a septic mucous membrane and not a stricture. May it not be that some of our failures have been due to not making a direct surgical attack on the diseased mucosa? A nasal polyp is snared, a nasal granuloma is removed and its base curetted, a nasal ulcer is treated by topical applications. Precisely similar methods are not applicable to these conditions when occurring in the lacrimal sac and duct, but curettage, followed by the application of some suitable medicament, fairly well fulfills the indications.

Thompson's operation may be described as follows:

The lower canaliculus is freely slit, a small sized Buck's ear curette is introduced into the sac, which, if discharging, is curetted. The handle of the curette is then elevated and the curetting ring engaged in the upper ring of the bony duct. By gentle pressure it is then passed downward until the obstruction is reached, when a rotary or augur-like motion replaces the downward pressure. Soon the obstruction is passed and the curette enters the nasal cavity. The middle and large sized Buck's curettes are then used in a similar manner. The operation is completed by applying tincture of iodine, lightly, to the walls of the sac and duct.

I began to perform Thompson's operation in May, 1918, and was favorably impressed with its possibilities. Every case showed immediate cessation of pus formation in the sac, or at any rate pus could no longer be pressed out of the sac. Several of the patients first operated presented themselves weeks or months later with recurrences. The following seemed a reasonable explanation therefor: curettage causes a good deal of primary postoperative reaction, with serous exudate and swelling of the mucosa which may be sufficient to block the canal. If, therefore, primary drainage is interfered with,



Fig. 1-A



Fig. 1-B

Fig. 1.—A. Lacrimal sac bur. B. The same enlarged to show detail of bur.

fluid is bound to accumulate in the sac and, acting as a culture medium, give rise to pus in expressible quantities. It seemed reasonable, therefore, to supplement curettage by immediate dilatation of the bony duct beyond the diameter of the largest Buck's curette (3 mm.) so that, despite the swelling of the mucosa, there would still remain a passage to the nose sufficient for drainage.

I was not satisfied with the action of Buck's

curettes (the curetting ring having a tendency to cut or lacerate the mucosa) and consequently designed a set of four instruments which I believe have many advantages. As the purpose is to shave off surface irregularities and gently to curette areas of ulceration while traumatizing normal mucosa as little as possible, the instruments are provided with sloping ridges so that the stroke is a sliding one, after the manner of a razor.

The ordinary dental bur and reamer served as models for the instruments herewith pre-

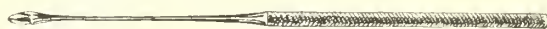


Fig. 2-A

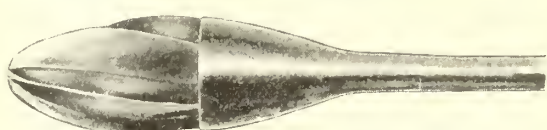


Fig. 2-B

Fig. 2.—A. Lacrimal duct reamer. B. The same enlarged to show detail of reamer.

sented. The lacrimal sac bur consists of a small round boss, bearing curved ridges after the manner of a dental bur and is mounted on a slightly flexible shaft. The boss is 2.3 mm. in diameter (Fig. 1, A and B). The sac and duct applicator is similar to the bur but is made of hard oxidized silver. It will hold a wisp of tightly wound cotton securely and being made of silver will not rust when brought into contact with tincture of iodine. The lacrimal duct reamer is modeled after a dental reamer but is made shorter and with a rounded, blunt end. It is mounted on a slightly flexible shaft. It has five curved ridges so sloped that when the handle is rotated the forward passage of the instrument is facilitated. The diameter of the reamer proper is 3 mm. (Fig. 2, A and B). The larger reamer is 3.2 mm. in diameter.

The combined operation is performed as follows:

After dilating the lower punctum with a conical probe, the sac is thoroughly irrigated with mercuric chlorid, 1-5,000. A few drops of 5 per cent. cocaine with epinephrin are then injected thrice, at two minute intervals. The canaliculus is then slit and the lacrimal sac bur introduced. The ridged boss is brought into contact with all parts of the mucosa of the sac and the surface curetted by a rotary motion from left to right. The position of the handle is altered to insure that all parts of the sac shall come in contact with the bur. The latter is then withdrawn and a moderate sized probe (Theobald 5 or 6) is introduced and passed to the nostril. The purpose of this preliminary probing is to create an opening sufficient to permit an anesthetic solution to come in contact with the mucous membrane. On withdrawing the probe I inject a few drops of a 10 per cent. solution of cocaine with epinephrin and repeat twice at two minute intervals. The smaller duct reamer is then inserted. As soon as the tip comes in contact with the lacrimal bone the handle is elevated and the tip is made to engage in the upper end of the bony duct. By a

5. Fergus: Ophth. Rev. 30:231, 1911.

rotary motion (from left to right) combined with a little downward pressure the reamer is made to worm its way through the duct to the nasal cavity. The reamer is then withdrawn (either by direct upward pull or a reverse rotary motion) and the procedure repeated with the larger reamer. As the diameter of this reamer is 3.2 mm. a probe somewhat smaller in diameter, say Theobald 11, can now be readily passed. Successively Theobald 12, 13, 14 and 15 are passed to the nostril. The operation is completed by touching the mucosa of the sac and duct, lightly, with the cotton wound silver applicator moistened with tincture of iodine.

The postoperative reaction is surprisingly slight. There is dull, aching pain lasting several hours. Iced compresses, a boric acid wash and a bland ointment suffice for the immediate after treatment. On the third or fourth day after operation, Theobald No. 11 or 12 is passed very carefully, after thorough cocainization. It is best to probe (using Theobald No. 10, nothing smaller) every fourth day for a month. Thereafter the intervals may be longer, say every ten days. For the best result, probing should be kept up for three months. It is not of course always possible to control patients for this length of time and yet the results are excellent in those who cannot be kept under observation for more than two or three weeks. There is some tendency for the canaliculus to contract at the point of junction with the sac and it is principally for the purpose of obviating this tendency that it is desirable to prolong the period of probing.

**Contraindications.**—The operation should not be performed: (1) where by reason of former unskilled probing or incomplete operation aimed at removal of the sac, the region of the sac has been converted into a mass of scar tissue; (2) in acute phlegmon of the sac; (3) in the dacriocystitis of infants; (4) in simple epiphora; (5) in impermeable bony occlusions of the duct; (6) in syphilitic or tuberculous diseases of the sac.

In a paper read before the Section on Ophthalmology, American Medical Association, June, 1919, I<sup>6</sup> detailed sixteen cases operated on by curettage supplemented by rapid dilatation. Of these sixteen cases, ten yielded first-class results (no discharge, free drainage, moderate or no stillicidium), three were improved (no pus but a small amount of mucous expressible), and three were failures.

The following cases recently observed are indicative of what may be reasonably expected from the combined operation:

Mrs. P. K., aged 37, came under my care July 5, 1919, through the courtesy of Dr. Keller. The left eye had been watery and pus could be expressed from the sac for over a year. Despite frequent syringing with antiseptic solutions and dilatation with small probes, pus continued to form. The sac was somewhat dilated. Pressure over the sac resulted in discharge of most of the contents into the nasal cavity

but some passed through the canaliculi into the conjunctival sac. A fold of mucous membrane prevented easy entrance of the probe at the upper end of the duct. After a little maneuvering, however, this fold was pressed aside and the probe passed to the nostril. The combined operation was performed July 5, 1919. Probes (Theobald No. 13 and 14) were passed at four day intervals up to July 31. During this period the drainage was perfect and there was not pus collection in the sac. On October 2 patient returned with reaccumulation in the sac. The operation was repeated. Probes were passed up to November 20. Last seen April 1, 1920. No pus, no stillicidium, fluid passes in stream to the nostril.

Mrs. J. T., aged 35, first seen May 24, 1919. Acute phlegmon of the right sac three years before. Sub-sided without incision. Since then eye has been watery and pus can be expressed. Has been treated with small probes. Right sac dilated. Mucopurulent contents can be pressed down to nostril. Combined operation with rapid dilatation up to Theobald No. 16 reestablishing immediate drainage. Probes passed up to July 31. Reported by letter March 23, 1920: "No further trouble."

**Conclusions.**—Curettage, supplemented by rapid dilatation, possesses the following advantages:

1. It is simple: anyone who has acquired skill in passing probes can perform it.
2. It fulfills the surgical indications by ridding the mucosa of products of inflammation and by insuring adequate primary and secondary drainage.
3. It is not destructive.
4. It is an "office" operation.
5. It may be repeated several times if necessary.
6. Should this method fail the sac can be extirpated or destroyed as readily as if no operation had been performed.

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#### SUBCONJUNCTIVAL INJECTIONS OF CYANIDE OF MERCURY IN THE TREATMENT OF ULCERS AND INFECTED WOUNDS OF THE CORNEA\*

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The efficacy of the varied methods of treatment for corneal infections will not be attempted in this brief paper. The fact that there are many kinds of treatment can be readily verified by scanning the present day ophthalmic literature on the subject. It is evident we have not yet permanently settled the method par excellent to be followed in any one given case—for example, progressive corneal ulcer—and probably will not for some time to come. Therefore, I feel I am justified in drawing your attention to an argument favoring the cyanide method, claiming its merits to be second to none and

6. Green: Tr. Sec. on Ophth. A. M. A., 1919.

\* Read at the Sixty-Third Annual Meeting of the Missouri State Medical Association, Jefferson City, April 6-8, 1920.



in my hands the most reliable and effective means of treatment.

In passing, permit me to mention the well established methods of treatment now recognized and considered authority—sanctioned procedures: caustics, curettement, Saemisch incision, thermocautery and galvanocautery. Of more recent days, chauffage (Weekers), thermotherapy (Shahan), pasteurization (Prince), subconjunctival injections of normal saline and cyanide of mercury solution (Darier), serobacterins (Wendell Reber) and parenteral injections of sterilized milk (Pugk of Dresden). Aside from these recognized procedures of treatment there may be included the removal of a focus of infection remote from the eye but causing disease of the cornea, such foci being found in the teeth, tonsils, accessory nasal sinuses and intestinal tract. Not infrequently all that is necessary to bring about a cure of a corneal ulcer or a keratitis is a thorough removal of the remote foci of infection.

All these attempts are made with one end in view—to destroy the pathogenic germs, raise the natural resisting powers of the corneal tissues against bacteria, and hasten convalescence. Ever since Darier in his memorial work on "Ophthalmic Therapeutics" advocated the use of subconjunctival injections the profession has adopted the practice but not with sufficient enthusiasm to make it as popular as the merits of the method deserve. To Dr. E. L. Jones of Cumberland, Md., due credit should be given for constancy and perseverance in calling the attention of the ophthalmic profession to the wonderful results obtained from the use of cyanide of mercury injections. The power and healing effects of these injections is thought to be due not to the specific drug itself but to some process in which the drug merely figures in the action of increasing the circulatory activities by the distention and flushing of the lymph channels.

The advantages of this method may be summed up as follows: There is no destruction of corneal tissue; the site of the ulcer, the stage it is in or the size or any other reserve need not be considered. The healing is sure and rapid, the transparency of the cornea more marked, and scar formation less evident. The influence of the treatment on the subjective symptoms is very evident and positive. Immediately after injection the pain is more or less of a severe type, lasting from ten to thirty minutes, but made bearable by the application of hot compresses. When the postoperative pain has ceased further suffering from the disease vanishes entirely in the majority of cases, and in the few instances where it does not the amelioration is so positive that the patient seldom fails to express words of gratitude.

Bichloride of mercury was formerly used but

was soon abandoned in favor of cyanide of mercury because cyanide is much less painful, less toxic, is compatible with all the alkaloids, with epinephrin chloride and various other drugs which are decomposed by the bichloride. For five years I have been using the Jones' cyanide solution. Its composition is as follows:

Acain .....	1 part
Boric acid .....	1 part
Sodium chloride .....	4 parts

One-half grain is dissolved in 2 c.c. of 1:1500 cyanide. To this is added one-half grain each of dionin and morphin. If quick action is desired on the pupil, 1/100 grain of atropin is added to the solution. The operation of injection does not require the use of a speculum and forceps as the hypodermic needle point readily picks up the conjunctival membrane. The preferable point of attack is midway between the recti muscles and as far away from the cornea as possible. Immediately following the injection of 2 c.c. of the solution the entire conjunctiva is raised in a bleb, one quarter of an inch or more in thickness, swelling rapidly extends to the lids and frequently the entire side of the face down under the chin and to the opposite side, at which no alarm need be taken. The chemosis which sometimes continues for several days may entirely conceal all of the cornea except a small pupil area. The ecchymoses require from two to four weeks to disappear entirely, but it is not conspicuous. Every time an injection is made the conjunctiva becomes adherent to the globe over an area of about 12 mm. in diameter. This condition does not cause any limitation or discomfort of movements or distortion of lids. The majority of cases require only one treatment. Obstinate cases are not submitted to repetition oftener than twice a month (Jones).

To the inexperienced, this form of treatment appears anything but attractive and convincing on account of the apparent severe reaction of the parts and surrounding tissue. On the other hand, the experienced operator prefers to see the marked type of reaction because he knows it means quicker and better results. The simpler forms of corneal infections are not submitted to the injection method. These do well under the usual forms of established treatments, but where a virulent type of infected corneal wound exists, for example, a pneumococcus infected wound following cataract extraction; lacerated or penetrating wounds; in the serpent ulcer with hypopyon; sloughing cornea; and all other varieties of extensive and rapidly developing infections of the cornea—the sooner the cyanide injection is administered in these cases the better the prospects for obtaining a good result.

The clinical results of the cyanide treatment have been in my hands uniformly favorable. The success achieved, particularly in cases seem-

ingly hopeless, has made of me a confessed enthusiast. To my colleagues who have not had the courage to use the cyanide treatment, I desire at this time to urge them to add it to their armamentarium and be richly repaid for the effort.

The following are a few abbreviated case reports which will give an idea of the behavior of certain kinds of ulcers and infected wounds of the cornea and the gratifying results obtained from the treatment:

CASE 1.—Mrs. K., aged 62; general health fairly good; consulted me April, 1918. History: finger nail injury of left eye three weeks previously. Large central corneal serpiginous ulcer covering entire pupillary area. Vision: recognizing hand movements. Suffering intense pain and photophobia. Has been under the care and treatment of a colleague since two days following the primary injury. Treatment and result: an injection of 2 c.c. of cyanide was made. Complained of very little pain. The usual swelling of lids and edema of conjunctiva appeared. The following day patient reported first good night's sleep in three weeks and was entirely free from pain. In three days improvement became evident and from then on rapidly convalesced until the fourteenth day, when she was discharged cured. A dense scar remained over the pupil. Subsequently obtained 20/100 vision by an iridectomy.

CASE 2.—Female, aged 68. Four days previously she had been operated on for cataract. Was called in consultation to see case. The corneal wound was gaping and bathed in a mucopurulent discharge, lids swollen and conjunctiva beefy. The corneal flap infiltrated down to pupillary margin. A pneumococcus infection, patient suffering severe pain. Case looked hopeless. After cocainizing eye, 30 minims of cyanide was injected, dividing the dose equally above and below the cornea. In the course of a few hours all pain disappeared. In twenty-four hours wound began to clean itself, discharge markedly diminished and beginning wound closure was evident. Gradually the haze in the corneal flap disappeared. Patient went on and made a good recovery and at the end of a month obtained 20/60 vision.

CASE 3.—Male, aged 25, referred to me by Dr. C., Nov. 10, 1919. Right eye injured two days previously by flying piece of steel, causing a lacerated wound extending across upper third of cornea involving iris and lens. On fourth day, traumatic lens; anterior chamber filled with yellow exudate; wound infected; conjunctiva chemotic and lids swollen. Suffering intense pain. Ordinarily, this would have been a case for enucleation, but thanks to cyanide injection the eyeball was saved from such a tragedy. This case received two injections, two weeks apart. At the end of three weeks patient returned home. In January, 1920, returned for examination. Eyeball pale, dense corneal cicatrix, partly incarcerated iris, upper half of lens absorbed. Counts fingers at three feet.

CASE 4.—Lieut. M., aged 35, admitted to Research Hospital, Aug. 4, 1918, and operated on for inguinal hernia. At time of entrance into hospital both eyes normal. Twelve hours after operation was called in by the attending surgeon to see patient, who was complaining of intense pain in left eye. Patient insisted eyeball was injured during operation by the anesthetist dropping ether in the eye or one of the attendants scratching the eye with a towel or a piece of gauze. Examination, left eye purulent discharge; both lids swollen. Noted a superficial linear abrasion of the cornea about 4 mm. long extending horizontally from temporal limbus to margin of pupil, surrounded by a dim zone of infiltration. Cultures revealed straight

pneumococci. Second day: all symptoms aggravated, corneal abscess rapidly extending in all directions; hypopyon. Attending surgeon refused permission to inject cyanide. Third day: entire cornea infiltrated; circumference of cornea elevated from sclero-margin; beginning slough. By request, Dr. Curran was called in consultation and concurred in the opinion that the only chance of saving the eye depended upon the immediate injection of cyanide. Consent was given. Two c.c. of cyanide injected above and below. The usual reaction occurred. The following morning patient was free from pain; discharge diminished materially; necrotic process seemingly checked; swelling of lids markedly reduced. At the end of forty-eight hours positive signs of resolution were evident. Cornea began to clear at the margin, discharge had entirely ceased. Patient continued to improve and at the end of three weeks left the hospital with prospects of fairly good vision. Treatment was continued at office and at the end of six weeks cornea had cleared to such an extent that he was able to read 20/100. Year later: superficial opacity at site of primary lesion; balance of cornea transparent. Distant vision with correcting glasses, 20/40.

CASE 5.—Female, aged 8, admitted to Research Hospital Dec. 4, 1919. Diagnosis: gonorrheal ophthalmia complicated with corneal ulcer of the left eye. In addition, there was a profuse vaginal discharge. Dec. 5, tense swollen lids; profuse discharge; ulcer spread over lower half of pupil space; great pain. My assistant, Dr. Harry Davis, injected a full dose of cyanide. On our next visit we were surprised to find the eye absolutely free from discharge; the ulcer changed from a deep yellow to a gray color, superficial in depth and contracted in size; free from pain. Improvement continued until the seventh day, when an acute flare up occurred with return of pain and signs of deeper involvement of the cornea. A second injection of 15 mm. was administered. This was followed by an arrest of all untoward symptoms; patient made an uneventful recovery and was discharged from hospital on eighteenth day. Examination Feb. 20, 1920: Eyeball pale, pupil normal, scar involving lower margin of pupillary area; vision 20/70.

CASE 6.—Male, farmer, aged 47. Extensive oval shaped serpiginous ulcer occupying upper third of cornea and involving upper half of pupil space; large hypopyon; contracted adherent pupil; patient prostrated by intense pain and loss of sleep. Treatment: 2 c.c. cyanid injection to which was added atropin,  $\frac{1}{400}$  grain, on account of the adherent pupil. The reaction was unusually intense in this case, pain lasting fully an hour accompanied with some nausea. Following day reports first good night's sleep in three weeks; suffering no pain. Lids swollen; conjunctival edema covering part of cornea; hypopyon less in size; no appreciable change in ulcer; pupil still contracted and fixed. Fifth day, no infiltrated zone around ulcer; anterior chamber free from pus, pupil semi-dilated and irregular. Tenth day, resorted to second injection on account of new focus of infection accompanied with considerable pain and photophobia. The reaction was decidedly milder than in the previous injection. The arrest of this second attack was prompt and the eye continued to improve from day to day until March 17, 1920, when he was dismissed from further treatment. The condition of eye on day of discharge was as follows: Large oval leukoma covering upper third of cornea; pupil irregularly dilated; some rust deposits on lens; iris normal in color; ocular conjunctiva slightly thickened and red; no fear of light. Vision: counts fingers at 18 feet.

The above cases represent a few of the hazardous variety of corneal infections which do not respond to the usual medicinal and mechan-



ical procedure resorted to but, as demonstrated, will sometimes respond most effectively to subconjunctival injection of the cyanide of mercury. I am of the firm conviction there is no safer or more dependable treatment for the virulent types of corneal infections than the cyanide method.

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### THE EYE, THE WINDOW OF THE SYSTEM\*

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A paper by Dr. Engman appeared a short time ago entitled "The Skin; A Mirror of the System." I am going to make use of his metaphor in the title of my paper, "The Eye, the Window of the System." From time immemorial the eye has been looked upon by poets and authors as the one structure giving greatest individuality and expression to the physiognomy. How expressionless is the face with the eyes closed. It is but natural then to view this highly differentiated organ of special sense with the greatest regard in medical observation. One need refer but casually to the obvious things, such as the bright eye of sthenic fever, the shrunken eye of wasting disease, and the protruding eye of exophthalmic goiter. Hardly anything strikes the consciousness of an observer more forcibly than a deviation of the eyes from the normal. The frequent "black eye" reminiscent of the ancient days of John Barleycorn was a prolific source of witticism. The unilateral ptosis and divergent squint of acute onset immediately raises in the mind of the ophthalmologist the possibility of the presence of syphilis. Merlo has described what he is pleased to term the "syphilitic eye," characterized by a slight droop of one eyelid which is accompanied by slight strabismus and a peculiar mixture of vagueness and sadness in the glance. This "syphilis eye" was found by him to be common in the secondary and tertiary stages and probably the effect of involvement of the meninges. A squint whether vertical, divergent, or convergent, is a very conspicuous defect which, apart from the cosmetic viewpoint, can have the greatest possible practical significance to the individual. That it may have some influence on the development of the moral fiber and character cannot be denied. Indeed an article in the *American Encyclopedia of Ophthalmology* has been devoted to this subject. From an economic and social aspect strabismus is of tremendous importance, often making diffi-

cult the questions of employment and marriage. It is with disease however that physicians are chiefly concerned. Quite frequently some peculiarity of the eyes will start a train of reasoning in the observer leading up to a correct diagnosis in a rather obscure case. For instance, at the present time trachina is rare, yet I have known of the disease being suspected solely because of the peculiar edema of the upper eyelids, and the diagnosis confirmed by an eosinophilia and the demonstration of the spirals in muscle tissue. The same ocular appearance may however be produced by frontal sinus disease.

It is with intraocular conditions that the term "Window of the System" may be more aptly applied to the eye than the poetic appellation of "Window of the Soul." Reference might be made to affections in the anterior portion of the eye suggestive of or related to systemic disease, as for instance keratitis and iritis the result of general or focal causes. There may be placed in the same category such affections as cataract, anomalies of the pupil which are of much significance to the neurologist and general practitioner, and to vitreous opacities which give so much concern to patients. The lack of time precludes the consideration of all these.

Our chief interest resides in the optic nerve, retina and choroid, as lights in this window of the system. Disease does not always manifest itself directly, so that a diagnosis is frequently made by the ophthalmologist before any systemic disease is suspected or the nature of an ailment is made apparent. The appearance of the optic nerve often in such cases reveals the trouble. This is so true that in all thorough examinations the investigation of the fundi is never neglected. An optic neuritis or choked disc is indicative of some general disturbance or intracranial condition. The reverse is not true though that these conditions need be accompanied by fundus changes. The majority of brain tumor cases reveal choked disc at some stage of their existence, though a choked disc may be present and unsuspected for some time for the reason that there may be little or no interference with vision. Routine fundus examination would prevent this oversight. Choked disc does not always mean brain tumor as it is found in nephritis and some depraved blood conditions. True choked disc if it means anything means increased intracranial pressure. Operative procedure in renal and blood conditions causing choked disc is unjustified and without curative or alleviative properties. If due to neoplasm within the cranium, decompression of the brain is indicated, as continued choked disc by the natural sequence of events must, if unrelieved, eventuate in optic atrophy. This optic atrophy together with that resulting from an optic neuritis can be differentiated from

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the so-called primary atrophies by the appearance of the disc. Atrophy after inflammatory processes is characterized by an indistinct disc margin, a filled-in condition of the physiological cup, and an obliteration of the markings of the lamina cribrosa. In the primary atrophies the reverse is true; the disc is sharply defined, often of porcelain whiteness, the physiological cup is distinct and often accentuated with the markings of the lamina cribrosa very apparent. The significance then to the practitioner or surgeon is great, as it may be very influential in determining his line of action. The average physician may not be able to use the ophthalmoscope satisfactorily and draw conclusions therefrom, but he has a right to insist that the man who claims the ability to do so must be able to make the finer and more difficult differentiations.

The value of a medical communication is not always determined by its length. One of the important observations in ophthalmology from the viewpoint of the internist was that made and communicated by Marcus Gunn in a fifteen-hundred word article. His description of the copper wire appearance of the arteries in retinal arteriosclerosis with the strapping of the veins when pressed upon by a rigid artery, has never been improved upon. Such changes when observed suggest a cerebral arteriosclerosis with its sinister significance. If in addition to this vessel appearance there is a flame shaped hemorrhage of the retina, no matter how small, any hesitancy as to the diagnosis is immediately dispelled.

Closely associated with this is the well known so-called albuminuric retinitis. It is chiefly because of its prognostic significance that the general practitioner is so well acquainted with it. Renal retinitis is a better designation. Occurring in a cardio-vascular-renal case the prognosis offered is grave, two years being put down as the probable expectancy of life. This varies of course with the individual, some passing out in much less than a year and some continuing a considerably longer time. In a general way it might be stated that the more acute the nephritis the better the outlook, but given a middle aged or elderly person with retinal arteriosclerosis evidenced by copper or silver wire arteries, flat or flame shape retinal hemorrhages, and in the exceptional case the star shape muscular figure, the outlook cannot be other than gloomy and serious. The changes are degenerative. In the acute conditions, if the patient recovers from the renal affection, the retinal edema and infiltration may subside leaving the retina in a more or less normal state. Not always normal or completely so, but if the permanent changes by good fortune do not involve the macular region, sight may be completely restored. One of the dramatic yet terrifying things in medicine is the sudden

amblyopia or even blindness marking the onset of the eclamptic seizure. No conscientious physician relishes the interruption of a pregnancy, yet the question of sight and even life, revealed by the fundus picture, may demand the consideration of that procedure. A detachment of the retina has occurred in quite a number of acute nephritis cases, particularly so in the toxemic retinitis of pregnancy.

Rarely one meets with a sudden case of blindness, happily unilateral, in which the ophthalmoscope shows a pale disc, very narrow arteries, and a cherry red spot at the macula. An embolism or thrombosis of the ophthalmic artery has occurred. If the former it means that an embolus has been swept into the ophthalmic artery from a distant point, usually from a valvular affection of the heart. If a thrombosis it signifies vascular disease. In septic conditions either an embolism or thrombosis may occur or worse still an endophthalmitis septica, resulting in not only blindness but a disintegration of the globe.

Diabetes frequently shows itself as a retinitis, resembling in some respect a renal retinitis yet differing from it in the finer details.

While tuberculosis cannot be diagnosed from an examination of the eye itself, yet its presence is often suspected, either active or latent. For instance, many attribute phlyctenular disease to a tuberculous basis. Certain corneal, iritic and scleral affections we are positive are tuberculous, because of focal reactions from tuberculin used diagnostically and cure from tuberculin applied therapeutically. The same is true of retinal and retinovascular tuberculosis. Distinctive lesions of the retina and retinal vessels have come to be looked upon as almost typical of tuberculosis. When these heal, as they often do, under hygienic measures and tuberculin therapy, one is justified in considering them as expressions of the tuberculous diathesis, if I might be permitted to use that term. Syphilitic affections of the eye, because of their frequency, have received probably more attention than any other set of lesions. The affections of the anterior portion of the eye have been referred to. The choroid and retina are very susceptible to the toxic influence of syphilis and manifest the blight of that infection in many forms and at all ages. So characteristic are certain changes in the fundi of infants and children that one can almost diagnose congenital lues from the picture presented. In children between the ages of 5 and 15 retinochoroidal lesions are many times associated with or occur subsequent to an attack of interstitial keratitis, which affection while usually is not invariably the result of inherited lues. Optic atrophy in children should first of all cause us to inquire and look for syphilis. In the adult bilateral optic atrophy, optic neuritis, retinitis and disseminated choroiditis may



be the result of a number of causes, but of these syphilis heads the list. So sure are we of this probable etiological factor that there is no hesitancy in putting the question direct to the patient, or more diplomatically requesting a blood examination first.

It is impossible to touch upon all systemic ailments which manifest themselves ocularly, only the commoner conditions being here considered in a cursory manner. A plea is made for the wider use of the ophthalmoscope. Its employment is made obligatory in some European countries before a man may graduate in medicine. It is not so in our country yet more and more graduates are becoming familiar with it. The bromidic expression, "a little knowledge is a dangerous thing," is as true here as elsewhere, but the ability to avoid gross and egregious errors should not render the occasional user of the ophthalmoscope confident that he can make fine differentiations. I think it makes the observer realize more quickly his own limitations and more anxious to get the patient into hands of some one who can render a maximum of service. All of which redounds to the benefit of the patient. The delicate and sensitive optic nerve, retina and choroid are sentinels of the system, as it were, at far advanced outposts. To be able then to look at this window and view the optic nerve and retina, which in reality are expansions or outcroppings of the brain, and to see registered upon them the signs, forerunners and marks of systemic diseases, is indeed an accomplishment and privilege; a privilege which was denied our forebears previous to 1851 when the first crude ophthalmoscope of Helmholtz came into being.

For a long time the eye occupied a more or less isolated position. It and its diseases and changes were studied and treated with scant recognition of its true status as part of the whole. The charge has often been made that specialists were too narrow and this was aimed particularly at ophthalmologists. At one time and in some instances there was considerable truth in the assertion. But when the fact was brought home that the eye could and did participate, in a broad sense, in systemic disease, a new and better era was established and a closer communion was formed with general medicine.

To conclude, but to continue the metaphor in the first paragraph, the eye is a window into which all may gaze and see revealed before them not only the terminal and contemporary results of systemic diseases, but also the early manifestations of a disturbed physiology. That all may gaze and see with equal facility and clearness cannot be claimed. But the gross lesions should be made out and the aid and assistance of the skilled ophthalmologist can then be requisitioned. Only too often the ophthalmologist's aid is sought at the end instead of early in a disease process. In no branch of medicine is

one more often rewarded with valuable information, even though negative, and nowhere are the results more satisfactory than those gained in viewing the system, naked and exposed, through this window, the eye.

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## DISCUSSION

ON PAPERS OF SCHUTZ AND HARDY

DR. F. E. WOODRUFF, St. Louis: The treatment of corneal infections and ulcers of the cornea are as varied and numerous as there are practitioners. There are advocates of the subconjunctival injections and there are opponents, both equally warm in the positions they take. The question of infection after cataract operation is one that gives us all very great concern, and if the subconjunctival injection of cyanid of mercury will do all that is claimed for it we will rest better after doing some of these operations. I simply want to cite a few of the men who advocate cyanid injections and some who are opposed to it.

We cannot think of cyanid of mercury without thinking of Jones of Cumberland, Md. In the treatment of ulcer H. W. Woodruff (who happens to be a namesake) strongly recommends the subconjunctival injection of mercuric cyanid. Lewis of Minneapolis thinks the enthusiasm for subconjunctival injections is not as great as formerly in the treatment of serpent ulcer, while some observers think that mercury salts possess no advantage over 5 or 10 per cent. salt solutions. De Wecker believed that when properly carried out there is no remedy in all forms of corneal ulcer equal to subconjunctival injections. We find, however, Darier, Dufour, Senn, Dranoux, lauding injections and disregarding other forms of treatment of corneal ulcer. Hansell used subconjunctival injections in purulent infections of the cornea, spontaneous and traumatic, and although he has had no bad effects he says the remedy does not commend itself to him. De Schweinitz reports a case of glaucoma in a young man of 26 following subconjunctival injection of the cyanid of mercury. This followed twenty minutes after the injection. A salt solution used previously in the same patient had not caused any difficulty. Verhoeff, relating his experience in the treatment of corneal ulcers, dismisses the treatment with subconjunctival injections with the statement that he has found other methods so effective that it seemed unnecessary to give the painful method a trial. Necrosis is said to have followed the injections of cyanid.

In my own experience in the treatment of corneal ulcers that do not clear up with local mild applications, there is nothing to compare with the heat treatment as advocated by Shahan. This gives prompt relief with a minimum of pain and a maximum of good results. The application of his thermophore is simple and the results eminently satisfactory.

DR. ELSWORTH SMITH, St. Louis: The paper of Dr. Hardy appeals to me from the standpoint of hypertension and arteriosclerosis, and more from the standpoint of prognosis than diagnosis. Of course when hypertension and arteriosclerosis have gone far enough to give us a strapping of the vessels the condition is recognized in other ways long before that occurs. But it is the negative evidence in the retina in this condition that is of such importance to the internist.

Last year I presented a paper on the subject of hypertension and arteriosclerosis in which I advocated very strongly the recognition of hypertension in its early stages, taking the position that hypertension was one of the first steps in the development of general cardiovascular renal disease, really the first step being the accumulation in the blood of the so-

called pressor substances which lead to vasoconstriction of the arterial tree, resulting in hypertension, the hypertension eventually developing arteriosclerosis. From the standpoint of prognosis the really important point in this subject is the recognition of the condition in the early stages of the hypertension before the secondary changes occur, and in that connection I recommended that all individuals past middle life or at middle life be carefully checked up as to their blood pressure so that this condition could be appreciated early enough to prevent extensive changes of which the eye represents the later results. If patients were examined at middle life carefully and hypertension detected, then we would not have so frequently the pictures in the retina that the oculists see. We would have them controlled or delayed and possibly would prevent them very largely. At least the life expectancy of the individual could be greatly increased. So it is the custom in our office always to investigate cases at this period of life for hypertension, and it is also our custom always to refer them to an oculist to obtain his judgment on the eye ground, as we are more anxious for negative evidence than for positive. The positive evidence tells us we have detected the condition too late, but the negative evidence makes us feel that we have found the trouble at a time before vascular changes have occurred, before the arterial tree has lost its vasomotor response, and that therefore by removal of the cause we can prevent or greatly delay the progress of the arterial disease. So I think this paper is extremely valuable, especially from the above outlined standpoint.

DR. W. H. SCHUTZ, Kansas City, Mo.: In dealing surgically with any diseased organ we must keep in mind the integrity of the parts, also the physiological function. Any operation that interferes with this essential principle I think is contraindicated, therefore a great many of our modern surgeons have been working and planning to improve on this measure, with reference to dacryocystitis particularly—such men as West, Fraser, Prince, Thompson and Green, our own Blakesly of Kansas City, and others.

There is no question that in the milder forms of inflammation of the particular organ under discussion the old fashioned probe and syringe still has place, but unquestionably in the chronic treatment it is futile to follow this measure. Extirpation is only a procedure of last resort. The intranasal route advocated by many is quite successful in some cases when properly performed. It requires much time and is difficult and often impossible to perform on account of some nasal malformation. The Thompson method, or Dr. Green's modification of rapid dilatation and use of his special burrs, and the intranasal trephine operation of Dr. Blakesly, are the only two operative methods up to the present hour which give us any hope of establishing a cure and at the same time saving the function of the organ. There are two points of the Thompson method that have been a bugbear to me. One is the slitting of the canaliculus and thereby destroying the function of the canaliculus, and the other is the severe trauma to the mucosa of the bony duct.

The advantages of the Blakesly trephine operation that I wish particularly to call to your attention are as follows: The suction function of the canaliculus is not disturbed; there is no trauma to the duct; drainage is immediately established; the operation is painless and can be performed in a few minutes. There is scarcely any postoperative reaction, and there is speedy recovery. With the permission of the chairman I would like to read from the author's original paper a few lines descriptive of the Blakesly trephine operation which I think is the very best operative procedure we have up to the present:

"The operation is best done under local anesthesia, but may be done as well under general, the objection

to the latter method being the greater tendency to hemorrhage which is absent when local anesthesia is utilized. Proper local anesthesia makes it quite painless.

"The lower punctum is dilated sufficiently to allow a few drops of cocain, 10 per cent. in adrenalin, being injected into the sac, the eye being washed out at once to prevent the strong solution of cocain affecting the cornea. The canaliculi are never slit as this removes the suction action due to the pull of the orbicularis muscle pressing on the palpebral ligament, the latter being intimately connected with the anterior wall of the lacrimal sac.

"Cocain crystals dissolved in adrenalin are placed on the area named by West the 'torus lacrimalis' just anterior to the anterior end of the middle turbinate and immediately below the level of its attachment to the lateral wall of the nose. There is a slight convexity of the bone at this point caused by the floor of the lacrimal fossa. Anteriorly is the hard bone of the process of the superior maxilla and above is the anterior attachment of the middle turbinate and some ethmoid cells. The ethmoid is posterior and the inferior turbinate is below.

"An injection of one-half of 1 per cent. cocain and adrenalin is now made into the skin over the lacrimal sac at its mesial margin. A vertical incision  $\frac{1}{4}$  inch in length is made here, entering into the sac at its nasal attachment.

"A strabismus hook is now placed into the incision and traction made temporarily pulling the small incision into a triangular shaped opening. Through this opening a specially constructed trephine with a diameter of 3 mm. and a length of 3 cm. is introduced into the sac. This trephine is held in a dental right angle and is operated by means of a small motor and foot control.

"The trephine is directed down and in toward the torus lacrimalis, the dental right angle pressing against the closed eyelid. The current is now turned on for a second or two when the ceasing of resistance indicated entry of the trephine into the nose. It is then withdrawn into the sac and the process repeated until the whole nasal floor of the sac is removed. Usually the completed opening is in the region of the torus lacrimalis, but at times it lies partly behind the anterior tip of the middle turbinate. Trauma to the turbinate or septum is easily prevented as these structures can be avoided with a little care. At first a guard was used to protect the septum, but this was abandoned as unnecessary. The buttons of mucosa covered bone collect in the trephine and the clean cut opening needs little irrigation.

"The fact that so little trauma occurs from this procedure is one of the reasons why this method is followed by success, because practically no inflammatory reaction occurs and very little granulation with resulting contracting scar tissue to block the opening.

"The small skin wound is covered with a bit of cotton and collodion and no bandage is applied. The wound heals by primary intention as all drainage passes into the nose. Postoperative treatment when necessary is usually made from the nasal side. The tendency to closure has been very small since the whole nasal wall of the sac has been removed, and has only occurred in those cases in which a very thick, bony wall was encountered. This occurs in a very small percentage of cases. In cases with thick, bony wall the nasal mucosa can be elevated and turned into the opening to prevent the tendency to closure.

"Contraindications to this operation are serious nasal infections, syphilis, ethmoiditis, and atrophic rhinitis. If for any reason failure of the operation occurs the lacrimal sac can be extirpated as usual.

"The whole procedure occupies but a few minutes and, the patients have remarked, is less painful than the experience of having the nasolacrimal probed.



"After-treatment, when necessary, consists of applications of 10 per cent. silver nitrate into the sac from the nasal side to clear up inflammation or to repress granulations. Fluorescein solution dropped into the eye is of value in order to demonstrate the patency of the nasal opening, the green color appearing in the nose.

"Owing to the slight trauma and clean margins of the wound the healing is very prompt in the majority of cases."

DR. W. H. SCHUTZ, closing: I am very grateful for the confirmative expressions of the beneficial results obtained from the use of subconjunctival injection of cyanid. I do not wish to leave the impression that I use the injection method in every case of infected corneal wounds and ulcers but only in the more virulent types which do not readily respond to the usual methods of treatment.

Regarding the postoperative pain, I find that in the majority of cases the suffering is not so intense as some would have us believe, particularly when the Jones solution is used instead of the straight cyanid solution.

My observation leads me to the conclusion that the more intense the reaction on the parts the quicker and surer are the healing results. Take it all in all, I don't believe there is a more dependable treatment for these severe types of infected corneal condition than the cyanid injection.

DR. WILLIAM F. HARDY, St. Louis: My experience with subconjunctival injections has been limited to uveitis cases arising from focal infection and when all else has failed I have turned to cyanid of mercury; while the reaction is very great the results have been eminently satisfactory.

DR. JOHN GREEN, JR., St. Louis: Dr. Hardy has pointed out the disadvantage of a squint from a cosmetic and social standpoint, but it is also important to remember that a squinting eye is nearly always an amblyoptic eye. A fact that is not always remembered by physicians is that the longer a squinting child is allowed to go without treatment the greater is the loss of vision. If every squinting eye were brought under treatment within a few days of the beginning of the trouble there would be fewer half-blind eyes and operations would not have to be resorted to nearly as frequently.

Dr. Hardy mentioned swelling of the eyelids as an early sign of trichiniasis. I have on two occasions made a tentative diagnosis of such a condition from the fact that the patient appeared with swelling of the lids associated with fever, and on both occasions the diagnosis was confirmed by finding the parasites in the muscles.

Referring to Dr. Schutz's paper: I have not had experience with cyanid of mercury injections in corneal ulcers. As Dr. Woodruff has pointed out, in severe infective ulcers, especially those due to the pneumococcus, nothing compares to the application of heat by the thermophore as developed by Dr. W. E. Shahan of St. Louis. A single one minute application of this instrument at 158° F. is usually sufficient to check the process. The injection of cyanid of mercury has in my hands been most efficient in cases where general ocular sepsis following injury seemed to be impending. On several occasions I have saved such eyeballs by cyanid injections with preservation of some vision.

DR. JOHN GREEN, JR., St. Louis, closing: Dr. Lichtenberg has well said that the operation which Dr. Thompson proposed and which I have modified is a middle-ground operation. Probing with small probes and syringes is ineffective; extirpation of the sac is much too radical and should be reserved for cases which have failed to yield to less destructive methods. I fancy that some of the intranasal operations would be more successful if more attention were paid to the drainage of the lower portion of the duct. There is

a pathology of the lower portion of the duct as well as of the lacrimal sac itself, and yet most intranasal openings are made opposite the lacrimal sac. All these operations have to face the danger, admitted by all rhinologists, of ultimate closure of the opening into the nose. I agree with Dr. Schutz that small probes may be successfully used in certain types of lacrimal obstruction without pus formation. It is unfortunate that, in order to enter the instruments into the sac and duct, it is necessary to slit the canaliculus. Remember, however, that we are dealing with a purulent condition that demands adequate drainage, to insure which a sufficiently large opening is necessary. In order to minimize the trauma to the mucosa I devised these burs and reamers. If you will roll these instruments over the mucous membrane of the lip you will appreciate how mild is their action.

DR. WILLIAM F. HARDY, closing: It is not to be expected that a doctor can be a universal specialist and therefore team work is necessary. I have long advocated group diagnosis. As Dr. Smith pointed out, the negative findings in ocular examination are often as valuable as the positive, but we should not belittle the positive findings. For instance, in optic nerve trouble an early recognition will help us to a correct and prompt diagnosis of the etiologic factor. I think that in many cases of sphenoid sinus trouble if the diagnosis were made without delay, the sinus drained and the disease eliminated, optic atrophy would be prevented.

#### VESICO INTESTINAL FISTULAE\*

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Vesico-intestinal fistula is an uncommon condition; for this reason possibly very little is known concerning it. In a paper on this subject which covered the literature up to 1900, Pascal found but 286 cases. Prista Vesico in 1912, after searching the literature, could add but forty-two cases. Cunningham, in 1915, was able to find eight additional cases, six of them reported by himself, making a total of 342 cases up to April, 1915. From these figures it is apparent that the condition is comparatively rare. Undoubtedly, the condition giving rise to enterovesical fistulae most commonly arises in the intestinal tract and the chief etiologic factors are malignant growths and tuberculosis; rarely rectal abscesses, rectal ulcerations, appendix diseases, and occasionally syphilis or actinomycosis. Less often, the lesions producing fistulae are found in the bladder, and when the cause of the perforation is found there, according to Cunningham, it is usually the result of malignant growths. An indirect etiologic factor would be pelvic abscess or some intercurrent inflammatory disease of the pelvis, the fistula occurring secondarily to the disease. Occasionally it follows a trauma as a result of operation or injury.

The most common opening in the intestinal canal is in the rectum, Cunningham stating that nearly one-half of the collected cases were

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found in this structure and that the next most common location was found in the sigmoid; the remaining were in the small intestine and cecum. The fistulous tract between the bladder and intestinal canal may be either direct or through a sinus.

The recognition of vesico-intestinal fistulae is commonly not a difficult matter. Modern methods of diagnosis usually clear up the condition readily. The cystoscope, sigmoidoscope and roentgen ray frequently give unerring information both as to the presence and location of the opening. The cardinal symptoms of vesico-intestinal fistula are: (1) The passage of gas per urethra; (2) the passage of feces per urethra; (3) the passage of urine per rectum. Cunningham states that the presence of gas and fecal matter in the voided urine, or the presence of urine in the rectum, is pathognomonic, and careful inquiry into the history usually reveals symptoms referable to preexisting rectal or bladder affections prior to the perforation. After the perforation has occurred the symptoms are generally aggravated and frequent and painful urination depending on the resulting cystitis ensues. If the suppurative process in the bladder continues, renal infection is likely to take place and may terminate the patient's life. The presence of urine in the rectum is seldom of much consequence. The most constant and annoying single symptom found in the cases which have been reviewed to date has been a pneumaturia which is not only accompanied by an odor but frequently on escaping may be heard some distance from the patient. According to Parham and Hume, pneumaturia may occur after instrumental vesical manipulation; in neuropathic conditions and in glycosuric conditions the decomposing urine contains sugar. However, any of these conditions should be excluded without difficulty.

The prognosis depends largely on the nature of the primary lesion to which the fistula is secondary, naturally being most unfavorable when carcinoma or tuberculosis is the primary cause. In those cases in which the opening is due to trauma or inflammatory disease the prognosis is more favorable for the reason that these cases are amenable to operative treatment; and in a small percentage a spontaneous cure has occurred.

The form of treatment must depend largely on the nature of the etiologic factor responsible for the fistula. The fistulae due to trauma or inflammatory process, such as abscess or appendix disease, operation offers a very favorable outcome. When due to carcinoma or tuberculosis the prognosis following operation is not of course so favorable. In some instances in which the condition is due to tuberculosis or syphilis, spontaneous healing under appropriate treatment has occurred.

The method of operation will of course depend on the nature of the process producing the communication and the location of the opening with the gut.

The case which the writer desires to report came into the service of Dr. J. C. Lyter at St. Anthony's Hospital on June 20, 1919, and his history and findings of the case are quoted almost verbatim.

Mrs. O. H., 22 years of age, married three years. The onset began in 1912 with a lowered abdominal syndrome. There was a bearing down sensation across the lower abdomen from the umbilicus to the symphysis, extending at times from the lumbar region toward the genitalia. This sensation was present daily, the pain being increased by walking and not relieved by lying down; would radiate to the inner side of the thighs; worse during menstrual periods. There is constantly severe dysuria, worse after urination. The pain is not relieved by urination; at times there is frequency of urination both day and night requiring the patient to urinate every ten or fifteen minutes. There is a history of strings of blood, milky urine, and at times blood with the white material from the bladder, the quantity not exceeding a teaspoonful. She passes gas from the urethra many times during the day but never anything resembling stool in the urine, nor has she observed the presence of urine in the stool. The menstrual periods occur every twenty-eight days, dysmenorrhea lasting two or three days and always aggravating the bladder condition. This syndrome began in 1912, present daily and has developed greatly in severity. Patient has no idea of the etiology. In June, 1916, in another city, patient had an abdominal operation at which she states the left ovary and appendix were removed. This operation had no effect on her symptoms and in no respect improved her condition.

Nothing in the family history is of significance and her previous history includes ordinary childhood diseases with complete recovery. She has been married three years with no conceptions.

The patient is a slightly developed, moderately well nourished white lady, apparently 23 years of age; 5 feet, 5 inches tall; weighing 125 pounds. No psychoneurotic elements, no abnormal distribution of hair or fat, no abnormal pigmentation, no evidence of past or present skin disease, no enlargement of lymph glands; pulses are equal, of small volume, 80 per minute; temperature normal; blood pressure, systolic, 118; diastolic, 75. Heart, chest and nervous system reveal nothing abnormal. Abdomen well filled, flush with the ribs, no enlarged veins, visible peristalsis or hernias. There is a scar from the umbilicus to the symphysis, site of operation above referred to. Walls are slightly apastic; some rigidity in the muscles in the right lumbar and iliac region. No tumors or free fluid. There is some tenderness above the pubic bones, extending entirely across the pelvis. The sigmoid can be palpated—a rope-like mass, tender to pressure. Slight pain on palpating the right kidney. The liver, spleen and left kidney are not palpable.

No abnormal findings about the external genitalia. Bimanual examination reveals cervix to be small, closed, pointing downward and forward and very hard. Uterus is apparently normal in position, small and movable. There is great tenderness when the bladder is pressed between the two hands. No tumor masses in either broad ligament. No hemorrhoids, fissures or strictures about the rectum.

Urine is straw colored, cloudy, specific gravity, 1.010; albumin, sugar, bile, indican, dietic acid and acetone negative. Microscopically numerous pus cells about 5 per cent, low power field in a centrifuged specimen; few epithelial cells but millions of bacteria



of all types. After the patient was given barium by the mouth we could identify a large quantity of barium in the urine microscopically.

Blood: Wassermann, negative. Hemoglobin, 85 per cent.; red blood corpuscles, 4,600,000; white blood corpuscles, 7,600. No abnormal red or white cells. No malarial organisms. The various white cells are present within normal limits. Fluoroscopic examination shows that the rectum fills readily rising into the pelvis as does the remainder of the colon. The cecum is very large, lying in the pelvis. The transverse colon lies below the umbilicus. No filling defects, spasticities, or other abnormalities noted. Cystoscopic examination by Dr. Kramolowski discovered a red area the size of a 50-cent piece above and anterior to the right ureter. The ureters were catheterized and the urine from each kidney is perfectly normal. There is no diffuse cystitis.

This history and the fact that gas is passed from the bladder and that barium is found in the urine following its administration through the intestinal tract, proves definitely that the patient has a fistula between the intestine and the bladder and unquestionably warranted the diagnosis of vesico-intestinal fistula.

On June 27, 1919, the abdomen was opened to the right of the former scar and a number of adhesions between the pelvic viscera were found. The appendix had been removed as had the left ovary. The gall-bladder was found normal to palpation; the ilium was found adherent to the bladder about 18 inches from the cecal junction. The attachment between the ilium and bladder was not over a very large area. A pair of blunt nosed artery forceps could be pushed through the doubled up wall of the ilium, barely into the bladder. A second adhesion was found between the cecum and bladder but we were unable to prove definitely the existence of a communication between these two viscera. However, this was treated as though a communication did exist for the purpose of safety and both points of contact between cecum and bladder were inverted and closed by means of purse string sutures, three layers being used in the bladder site and two in the cecal site. Our attention was then directed to the unquestioned opening between the ilium and bladder. This anastomosis took place on a point well up on the fundus of the bladder and was very accessible. Before dividing the intestines, a purse string suture was placed around the fistulous opening in the bladder and another in the ilium, Dulox catgut being used in each instance. The anastomosis was then severed and the opening in both ilium and bladder was plainly evident though very small, less than the diameter of an ordinary lead pencil. Gauze packs had been placed around the field of operation to prevent contamination of the peritoneum with either urine or feces. The opening in the bladder was closed with this purse string suture, identically as is done in cases of an appendix stump. A second and third row of sutures were used in the bladder, the second row catching the firm muscular layer of the bladder and completely inverting the former suture into the bladder. Then a number of Lembert sutures were used to close over this layer. The opening in the ilium was closed first with purse string suture and then a few Lembert sutures with Dulox catgut made a second closure over this. The abdomen was closed in layers and the patient returned to bed without the presence of a retention catheter. She was catheterized every four hours, to prevent distention of the bladder, and aside from being placed on urotropin, no further after care was necessary. A report from her a few weeks ago indicated that she had fully recovered, though she had had some little bladder disturbance a few weeks after leaving the hospital.

University Club Building.

## DEEP THERAPY WITH THE ROENTGEN RAY\*

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The many methods employed in the treatment of deep malignant new growths have been carefully reviewed this morning, and I am indeed pleased to have this further opportunity of continuing the discussion; but necessarily will limit my analysis of this subject to the general experience of workers in another field of therapy: the radiation of deep malignant cells with the aid of the roentgen ray. I desire, however, to take the liberty of preceding my discussion with the following preliminary conclusions:

In the treatment of malignancy it has been our experience, when but a single method of attack was employed by means of the roentgen ray, radium, or surgery, that there have been many shortcomings, even though the apparent results in numerous individual cases fully justified such a limited procedure. While it is very essential to select the proper method or combination of methods of surgery, radium, or the roentgen ray, to combat this condition successfully, it is at the same time of still greater importance in the adoption of any specific method or combinations of methods of attack, to first of all establish the complete co-operation of the surgeon, internist, and radio-therapeutist.

A critical analysis of the results obtained thus far in medicine, surgery and the laboratory, cannot help but make us all realize the need of additional therapeutic measures to combat this pathology. It is true that the many advantages in surgery have been instrumental in limiting the progress of this disease. In the early malignant cases, following complete surgical removal of the new growth, many permanent results have undoubtedly materialized; but as a single weapon of attack in all stages of tumor pathology, the uniform ideal results continue to be unsatisfactory. The most favorable cases have frequently been disappointing. This is true of all the methods employed in the treatment of this disease, and equally so in roentgen ray and radium therapy.

The very early radiotherapeutic results were certainly promising and future complete cures did seem extremely probable in the larger percentage of cases, but with added experience we must conclude that these early expectations have been only partially realized. At the present time, however, the methods of treating these conditions are fortunately becoming less and less empirical and more and more definitely scientific. We all realize that the permanent control of this disease is proportionately depen-

\* Read in the Cancer Symposium at the Sixty-Third Annual Meeting of the Missouri State Medical Association, Jefferson City, April 6-8, 1920.

dent upon the destruction or eradication of each and every pathologic cell. Permanent cures can only be attained if every vestige of the disease has been completely destroyed or the growth of these cells permanently inhibited.

Consequently, special efforts have been made to investigate the reaction of radiations on cell processes and at the same time special studies concluded with reference to the type and quantity of radiation best suited to destroy deep seated pathologic cells without producing permanent injury to the normal tissues. The early apparatus available for the production of these higher penetrating rays were inefficient; and as a result, first of all, the high tension electric transformers were improved from time to time; added to these new advances, the Coolidge tube made it further possible for the radiotherapist to treat these deep seated malignant diseases more scientifically. The dosages at the present time are more easily regulated and duplicated, and penetrations and filtrations are increased far beyond previous possibilities so that these selective radiations may produce the desired maximum cell reaction in the deeper pathologic structures.

The action of the roentgen ray is not purely a caustic one, although such an effect may be desirable in some cases. Experiments by Russ and Colwell have shown that different radiations produce quite different reactions on the same variety of cells, and have been called the "differential action of the rays." The best example is afforded by clinical evidence. It has been shown that whereas the human skin cannot be given more than a pastille dose of soft, unscreened radiation without a dangerous degree of reaction occurring, it is quite otherwise when harder rays, i. e., rays of shorter wave lengths, are utilized. Not only can very much larger doses be administered through the skin by the hard rays but the reaction is totally different in kind to that provoked by the soft rays of longer wave lengths.

This differential action of the rays may be observed in the cell by distinct metabolic changes, stimulated cell proliferation, or complete disintegration and necrosis.

We may observe further histologic changes within the cells called the "selective action of cells," on which the Bergonic law was based: that "immature" cells and cells in the active stage of division are more sensitive to the ray than those which have already acquired their fixed adult morphologic or physiologic characteristics. For example, vascular and lymphoid cells, basal cells of the epidermis, sex cells, embryonal cells; all these are readily destroyed by radiation that produces little or no reaction in the surrounding mature or highly differentiated cells.

We may conclude, therefore, that the more rapidly a cell grows and reaches maturity the more sensitive is the effect of radiation on that

cell. However, different rays give rise to quite different effects on one and the same variety of cells. They have a differential action and a careful distinction should be made between this action (that which different rays have on the same variety of cell) and the selective action which the same kind of radiation has on the many varieties of cells.

Undoubtedly, we all realize the complexity of the problem before us. The treatment of these conditions is certainly a specialty in itself. I think that Dr. Boggs ably concluded the question when he said that a surgeon may be able to operate after consulting with someone who had clinical experience the same as the radiotherapist may be able to give the treatment after consulting with someone who has likewise specialized in this branch of therapy. In fact, the treatment of malignancy is a side issue with the majority of surgeons and radiotherapists. Many of them know very little about metastasis, and a large portion are frequently in doubt as to whether or not an operation is indicated. This is shown by the large number of recurrences following comparatively early operations and by the futile attempt to remove borderline and advanced cases. Inefficient treatment has so often lead to a fatal ending that no one inexperienced should employ any method of treatment for even the smallest epithelioma, questionable tumor of the breast, and least of all more extensive lesion, until he has had practical training in both surgery and radiotherapy. For example, the technic employed in the deep therapy of benign uterine conditions in which moderate penetrating rays are usually effective, would certainly be contraindicated in the therapy of deep seated malignant pathology. In fact, such a procedure will produce irreparable stimulation to the already rapidly growing cells. The technic to be employed depends on the type of the lesion, depth and extent of the tumor cells, and the individual characteristics of each case to the action of the rays must carefully be studied. The penetration and filtration may depend on the depth and extent of the tumor cells. For example, a lesion approximately 4 inches beneath the skin surface will require radiation equal to at least seven times the normal highly filtered skin dose, due to the fact that the intervening tissue has absorbed such a large portion of the less penetrating rays. Therefore, at least seven immediate portals of entry must be employed and cross-fired in the direction of the tumor in order to produce a degeneration of the pathologic cells beneath the skin surface.

In complicated cases where many vital areas should receive increased radiation through numerous skin areas, it is absolutely essential that the radiotherapist be thoroughly familiar with the lymphatic drainage system—the course of possible avenues of metastasis—in order to be able to alternately crossfire over



these vital centers. For example, in the malignant breast conditions, all types, it is essential to increase the radiation over the deeper lymph channel areas, the axilla, epigastrium, supraclavicular, suprascapular, subscapular, and the mediastinal regions. Otherwise metastasis cannot be controlled. The earlier such an attempt is made to block these lymph channels the better the prognosis.

In the treatment of epitheliomas situated on the mucous membrane, the lip, mouth, tongue, especially when there is an early invasion of the adjacent glands, such conditions are very resistant to the roentgen ray. However, the combination of radium locally and intensive roentgen-ray radiations over both sides of the neck and face in the direction of the many possible mediastinal channels, undoubtedly has given us better results. Electric coagulation may be of benefit. Radical surgery followed by intensive roentgen-ray radiation over both the lesion and adjacent lymphatic areas, has been successful in a number of our cases. At the present time, however, the better results have been obtained by the combined use of radically applied radium and roentgen rays.

In the treatment of malignant disease of the pelvic organs roentgen-ray therapy alone has not been successful; the addition of radium locally is absolutely essential. The palliative results have more than justified such a procedure in practically every case under treatment. However, additional time will be required to judge the future permanent results. This is likewise true of the malignancies in the bladder region. These conditions have been especially resistant to every form of treatment, although in three or four individual cases in which only palliative results seemed possible the patients did continue to be more or less symptom free the past three to four years.

In the general treatment of sarcomata it may be necessary to treat other than glandular lesions, especially the round celled variety in the soft parts of the extremities or those located in the bone tissues. The response to radiation is unusually prompt; however, a certain percentage of these cases have shown recurrences in the distant or deeper structures after a lapse of a few years.\* Sarcomata of the antrum in two cases responded to roentgen-ray therapy, the cases having been under observation for about a year. The tumor was reduced in size as evidenced by the reduction in the swelling of the cheek and the marked decrease in density of the antrum as shown by later radiographs. A third case failed to respond even to the most intensive roentgen-ray and radium therapy.

The most frequent type of malignancy treated by the radiotherapeutist is carcinomatous; and the many different practical problems presenting themselves in the treatment of these pathological cells require the adoption of as many different methods of procedure. First

of all, the therapy of recurrent carcinomata, both early and late, will require a careful study of the general course of the disease. This should be followed by the desired thorough and complete roentgenization. The lymph channels particularly must be efficiently crossfired with only the most highly filtered rays, and the quantity of radiation should be greater than ordinarily would be considered sufficient. In addition, we apply radium over localized areas, especially in the axilla of the breast cases, or in the supra and intraclavicular regions. Thorough roentgen therapy must first precede the use of radium or even surgery over these localized areas of infiltration. By the adoption of such a procedure a large percentage of recurrent carcinomatous breast conditions have been controlled for periods of from four to six years.

In the primary growths it is equally essential to radiate thoroughly the tumor cells as well as the adjacent superficial and deep lymphatic cells and their respective glands.

The prophylactic treatment in both the ante and postoperative malignancies is perhaps the most important and fruitful field in therapy. If a similar method of attack is adopted in these cases, as previously described for the recurrent types, the radiation perhaps less frequently applied but equally intensive and thorough, permanent results will be more often realized. It is true that the many workers in this field of prophylactic therapy differ as to the technic most desirable. Some advise a preliminary superficial radiation and later apply the somewhat higher penetrating roentgen rays. Others advise direct therapy of both the filtered and unfiltered rays through the open wound at the time of the operation. We have been observing that the most favorable and seemingly permanent results during the past five years have more frequently followed the use of the deeper penetrating gamma radiation, rather than the application of only the superficial, or a combination of the various type radiations.

We have been administering three successive courses of treatments, respectively, during three week intervals in these cases. The patient is then requested to return in two months for further observation. Additional treatments may or may not be administered at this time. At the end of four months, following the last course of treatments, another series should be given.

The question of relative immunity to malignancy is discussed by various authors from time to time, but detailed explanation as to the possible exciting causes have been lacking. Drs. Johnson and Holding in recent articles have again forced our attention to the partial or complete immunity observed in some individuals and the apparent increase of such an immunity following intensive roentgen therapy.

It is true that many hopeless conditions, such as the extensive inoperable abdominal and the

inoperable breast tumors, incomplete further inoperable cases, and the inoperable form in which there is a recurrence of the disease with or without visible metastasis, did show evidence of an increased immunity. Perhaps radiotherapy was one of the exciting factors producing this apparent immunity and resulting in the remarkable recovery of many hopeless cases similar to the types mentioned. We have observed definite evidence of at least a partial immunity in no less than six extremely hopeless cases with extensive liver, intestinal, and peritoneal involvement. All these patients have been operated upon and the carcinomatous lesions verified, both microscopically and macroscopically. The abdomens were closed without removal of the malignant structure and, with but one exception, the patients have continued to follow their previous occupations and are at the present time enjoying average good health. The original rapidly growing palpable tumors have partially or completely disappeared. Sometimes they return following too long an interval of discontinued radiations; however, these same lesions respond almost immediately to further therapy.

In another type of cases the original tumors were reduced in size as a direct result of the first few series of intensive therapy and have continued to remain quiescent during the past four years. Extremely large inguinal, metastatic nodules, rapidly increasing in size to the point of breaking through the skin, accompanying general abdominal malignancy, in the majority of the cases have been controlled by a series of fractional deep therapy doses. These tumors were reduced to one-half their original size and have remained quiescent the past four or five years, while at the same time the general abdominal malignancies were controlled in like manner; not with the deep fractional doses, however, but with the usual intensive skin tolerance doses.

It has been very apparent to us that the relative immunities present in many of these hopeless cases were certainly improved or increased by the roentgen therapy. We wish to report in detail two distinctly different types of the above six cases of hopeless malignancies, together with the general physical findings, clinical course, postoperative and laboratory findings. It may be of interest to know that both of these patients are members of this Association. At the present time one member is enjoying moderate good health and has continued to follow the duties of his profession for the past five years; the other physician followed a similar course up to within the past few months. Acute intestinal symptoms manifested themselves within a week and of course further relief could not be administered. However, it should be noted that therapy was unfortunately not administered during the past twelve months, with the exception of one incomplete treatment a few weeks previous to his recent acute illness. He

was frequently warned that it was absolutely necessary to resume these treatments, at least one series every three months, but he continued to procrastinate.

CASE 6399.—Dr. C. was referred to me by Dr. Pfahler,<sup>1</sup> and I take the liberty of appending his report.

Case referred by Dr. William J. Mayo on June 13, 1916, for treatment of a general carcinomatosis of the peritoneum. The patient was operated on May 23, 1916, by Dr. Mayo. Under date of June 6, 1916, Dr. R. D. Carman of the Mayo Clinic wrote: "The roentgen-ray examination showed a high cecum and slight filling defects in the sigmoid. These findings were thought to be due to an extrinsic tumor which is palpable in his right iliac fossa." He was explored by Dr. W. J. Mayo, who found a general peritoneal carcinomatosis of unknown origin. The abdomen contained free fluid and great masses of colloid material attached to the peritoneum, omentum, etc. Microscopic section showed carcinoma.

On the patient's arrival for roentgen therapy there was evidence of free fluid in the abdomen. There was a tumor in the right lower abdomen about the size of a large grapefruit, firmly adherent with general firmness in the abdominal tissues. He gave a history of having had an attack of appendicitis six years previously but no operation. Three to four years ago he noticed a swelling in the right iliac fossa. About three months before coming for treatment this tumor, which had grown progressively larger, began to give pain and obstructive symptoms were noted. He was given a course of deep roentgen therapy through twenty portals of entry within two days. After this course of treatment he was nauseated, pain was reported in the abdomen, and his temperature rose to 101, pulse 105. He returned for a second course on July 5. At this time the tumor was only about two-thirds its original size, though he suffered from pain in the epigastrium. The second course of treatment was given within five days. He returned on August 7, two months after treatment was begun, weighing 137 pounds; his weight before the operation was 170 to 177 pounds. Improvement in general appearance was noted but the patient complained of getting tired very easily. The abdomen was softer and the tumor had decreased in size. A third course of twenty doses was given within three days' time. The fourth course was given Sept. 14, 1918, after which he returned to his home in St. Louis, where he was under the treatment of Dr. Ernst. On Oct. 7, 1916, the patient writes: "Feeling very well. Weight, 162 pounds. Very little pain in the abdomen, though mass seems as large as ever." He was treated on an average of once a month by Dr. Ernst until July when Dr. Ernst left for Europe. On Aug. 9, 1917, more than a year after treatment was begun, the patient called to see me. At this time he looked perfectly well, had gained in weight, and had been attending to his practice since February, 1917. Palpation of the abdomen showed nothing abnormal along Poupart's ligament, which did not have the feeling of a mass, but only of increased firmness.

*Remarks.*—This patient, who was considered inoperable and in my judgment was hopeless when he first called on me June 13, 1916, has recovered his health, returned to his practice, and has visited me each summer at which time we found his abdomen soft. During the past year he has had some enlargement of the liver and some suspicion of a recurrence of the disease. In July, 1919, during his visit, we gave him a course of treatment over the abdomen and liver. On Dec. 20, 1919, he wrote: "I am

1. Pfahler: *American Journal of Roentgenology*, April, 1920.



about the same as last summer. Weight 148 pounds. Have had two series of roentgen-ray treatments from Dr. Ernst. Eat and sleep well and feel fine."

No matter what the future outcome of this case may be the patient has certainly had his life prolonged by four years with the hope of many more years; at the first visit he was as hopeless as any patient I have ever observed.

*Present Conditions.*—Dr. C. dictated the following report at my office in May, 1920: "I am pleased to state that my general health is exceptionally good. I feel perfectly well, have a good appetite, sleep soundly, and able to do a fair amount of work. However, I do not believe I am quite as strong as I was a year ago, and my weight is probably 10 pounds less."

During the past four and a half years we have continued to administer from twenty to forty massive doses every four weeks, with the exception of two to three month intervals between treatments, during which time the moderate skin irritation was allowed to return to normal. During his summer vacation, Dr. Pfahler of Philadelphia continued to administer the treatments. The liver condition which at one time did seem critical, at present does not show evidence of increased activity. In fact, the irregular liver enlargement has been decreased and the outline at present is comparatively smooth. A number of indefinite masses in the lower right quadrant have likewise been controlled, but as yet they have not entirely disappeared. The filling defects in the region of the cecum, the high fixation described by Dr. Carman in his roentgenologic report, have again been visualized under the fluoroscope during a colonic enema examination, but these previous filling defects have disappeared and the cecum has again receded to the normal lower right quadrant; all intestinal symptoms are absent at the present time.

The second type we wish to report was referred by Dr. Elsworth Smith, and later operated on by Dr. Harvey G. Mudd of St. Louis.

CASE 6440.—April 3, 1916; Dr. K. Examination shows liver quite large. Tumor mass pushes beneath lower border of ribs to the level of the umbilicus. This is in the region of the gallbladder. The mass is round, oval, and can readily be palpated.

Another round, hard mass was palpable, about the size of a hard walnut, opposite the umbilicus in the right side, which apparently became palpable within a week and continued to grow rapidly. This latter tumor may be a primary carcinomatous mass while the tumor in the gallbladder region may be a secondary malignant condition. Advised exploratory operation.

April 8, 1916. Operated by Dr. Harvey G. Mudd. Incision through the outer border of the right rectus muscle. On opening the abdomen the mass was immediately found presenting as a circular cancer of the cecum immediately above the blind end. It had contracted to such an extent it did seem remarkable that obstructive symptoms were not present. The infiltrating mass throughout the liver was evidently secondary carcinoma. The lower part of the ileum was short circuited to the transverse colon well away from the primary growth. A small piece of liver

was removed for examination. The abdomen was closed without drainage.

Pathologic report by Dr. R. Buhman presented the following findings: Section from liver tissue shows nothing but new growths; no evidence of normal tissues remaining. The entire section is made up with nests of cells varying in size, the nuclei being rather small and oval and fairly deep staining. There are a number of large oval, deep staining ones present; however, the majority of the nests are small. Connective tissue is very sparse and there is considerable congestion.

*Remarks.*—The patient at the time of the operation was in poor physical condition. However, massive roentgen therapy with only the most penetrating roentgen rays was administered within three or four days following the operation. Because of the apparent hopelessness of the condition therapy was only advised as a palliative measure, and likewise as a possible hopeful psychic effect on the patient. A second series through from forty to fifty skin areas was administered at the end of the following three weeks. The patient's response to treatment was almost immediate and his recovery so rapid that within five months he was able to do surgical operations for mastoids, etc. He continued to practice surgery the following four years with the exception of the two weeks previous to his acute subsequent fatal illness. During the past winter and summer he withstood many an acute infection; such as influenza, pneumonic conditions, etc. The mass in the right lower quadrant disappeared shortly after therapy was instituted and did not return during the following four or more years. However, in justice to the therapeutic measures adopted, treatments were not administered during the past twelve months with the exception of a very limited number of partial treatments given during the final four weeks. The palliative results in this case were certainly worth while, and perhaps had the patient been spared these severe acute infections, and the treatments administered more regularly these palliative conditions would have continued indefinitely.

The above cases were selected for complete detailed description because they are two distinctly different types of the many similar cases we have had under treatment the past six years. The results in all of these conditions have been likewise similar, both very favorable and unfavorable. However, palliative results were obtained in nearly all of the cases with the exception of a number of extremely hopeless lesions. We would prefer to report all these cases in detail but the limited time at our disposal will certainly not permit such lengthy case descriptions. It was likewise unfortunate that in many of these conditions, both the operative findings and the microscopic examination reports, were not obtainable. Case reports of this nature are only of value for our future guidance, if the clinical, surgical, and laboratory findings are included and described in detail. For example, we have

had under treatment four hopeless bladder malignancies. In two of these cases we are not in possession of the surgical and laboratory reports; however these lesions are undoubtedly malignant. These patients have continued to improve following the surgical removal of the growth supplemented with radium and roentgen-ray therapy during the past two to four years. Many of these bladder malignancies in the larger percentage of cases do not respond equally favorably. At any rate, the question of relative immunity to malignancy in these cases following radiotherapy is certainly both an interesting and a hopeful one and should be carefully considered.

It would be impossible at this time to discuss in detail the relative value of radium and the roentgen ray to the pathologic tissues in question. Both will produce a destructive action on the malignant cells when the radiation is employed with sufficient intensity. These reactions are promptly brought about by the direct absorption of the rays in the living cell, and indirectly by the radiation set up therein. Radium may be employed to induce a greater degree of reaction in tumors without resulting in the permanent injury to healthy tissue. Yet there is a definite limit to the penetrating power of these rays. The radiations produced by the roentgen rays are biologically effective at a greater depth than the approximate practical 4 cm. limit of the gamma rays of radium. Even though cross-firing is possible with an unusually large amount of radium, from a practical standpoint such radiations cannot be compared with the roentgen tube at the usual 8 inch distance, especially when the location and extent of the tumor is very much more than 1 inch beneath the skin surface.

It is true that sarcomata are frequently reduced in size by radium at a greater depth than 1 inch beneath the skin surface; for example, large quantities have been reported to be effective in tumors of the mediastinum; nevertheless these sarcomatous types are selectively susceptible to all forms of radiation, and we must not forget that the typical radiations of radium and the roentgen ray react correspondingly different on the many likewise different cells. A certain type of malignancy may be more easily degenerated by the radium than by the roentgen ray and vice versa.

The different technics employed in these conditions certainly vary. The reported results obtained by the many therapists likewise differ and these facts together with many others make a comparison of these two important forms of radiations rather difficult.

In the treatment of deep malignant lesions with either the roentgen ray, radium, or both, it is essential that a sufficient quantity of radiation be absorbed by the pathologic tissues in order to produce the lethal dose in that cell. Therefore, the matter of the selection of an

effective technic in the individual case is of vital importance.

*Technic.*—The technic we have employed in the treatment of malignancy with the aid of the roentgen ray has undergone constant changes towards obtaining the more effective higher penetrating radiations. In the past three years we have employed as high as 8 mm. of aluminum, administering from 60 to 70 mm. exposures to each area and employing the highest possible potential 9.5 inch constant spark gap equivalent. In the extremely hopeless cases, both the filtration and length of exposure is increased to more than double the above millimeter minute dosage at the usual 8 inch skin distance. The skin reactions under these conditions heal practically as rapidly as those produced by radium. Therefore, we are inclined to conclude that the higher penetrating rays through 6 or 8 mm. of aluminum are more nearly alike in character to the gamma rays of radium than the previously filtered roentgen rays through 3 mm. of aluminum.

It has been our experience that dermatitis following the use of 3 mm. of aluminum did heal less rapidly. These clinical observations are certainly in favor of the higher penetrating rays and the corresponding increased exposures. However, a word of caution would not be amiss with reference to these extreme doses. Untold injury may result unless these penetrating radiations are administered by skilled and experienced radiotherapists.

In another type of cases following the initial massive dose, we have reduced the time interval of three weeks between treatments to fourteen days, and continued to so treat these hopeless cases to the point of a skin reaction. Radiations were then discontinued for short periods of from four to eight weeks to allow the skin to recuperate. It has been very gratifying to observe the apparent total increase in the amount of exposure possible through the various cross-firing skin areas without a marked dermatitis developing. At the same time the reactions on the general physical condition of the patient was observed to be less severe. Another practical advantage of the more frequently repeated 60 to 70 mm. exposures filtered through from 6 to 8 mm. of aluminum, 8 inch skin target distance, 9.5 inch spark gap—is the lessened danger and early discovery of double dosing. Severe skin reactions can usually be observed previous to the termination of the two weeks interval. As a general rule the reactions taking place at the end of three weeks are undoubtedly less important. Of course we must remember that latent reactions do occur over skin areas at the end of three weeks. However, we wish to emphasize again that in the majority of the hopeless cases the future course of the disease is directly dependent on the first treatments administered, and it is, therefore, essential that the very earliest



exposures should be massive doses, highly filtered, and administered to the limit of the skin tolerance through as many ports of entry as possible. The intensive initial dose is the most important and decisive factor in the prognosis of hopeless malignancies. The percentage of recurrences is decreased by completely destroying all the remaining "rest cells" during the early treatments, previous to the formation of protective fibrosis to the rays around these resistant mature malignant cells.

**Conclusions.**—In our preliminary conclusions we emphasized the importance of the surgeon, internist and radiotherapist cooperating in the treatment and control of malignancy; and we therefore wish to further present the individual conclusions of each from as many different viewpoints. On the question of both anteoperative and postoperative radiations in malignancy, Dr. William J. Mayo, in his presidential address before the Clinical Congress of the American College of Surgeons, Oct. 20, 1919, concluded as follows:

Radiotherapy has justly achieved a reputation in the postoperative treatment of cancer. It would appear, however, to have its greatest field of usefulness in preparing a malignant area against wound grafting during operation and its ability, at least temporarily, to reduce the vitality of the malignant cell. Radiotherapy, whether applied as radium, roentgen ray, or heat, sickens malignant cells beyond the area of destruction. During this period of cell sickness their resistance is reduced and operation is most efficient, but operation should not be delayed after radiotherapy, since the period of increased cell vulnerability is short, and the connective tissue development which interferes with subsequent operation, is rapid. By properly combining radiotherapy with surgery we can increase operability, lower mortality, and increase the percentage of cures. Radiotherapy destroys cells for a certain distance, but cells are sterilized at a greater distance, so that their reproduction is checked and connective tissue is caused to develop which acts as a barrier to further extension of the malignant process.

In a lecture delivered at the House of the Royal Society of Medicine in November, 1919, by Dr. Francis Hernaman-Johnson on the value of combined treatment, with special reference to surgery, electricity and roentgen rays, he very interestingly concluded as follows:

Combined treatment must be carefully distinguished from blunderbuss therapy—this latter may be defined as the simultaneous employment of a whole host of drugs or methods, each individually of doubtful utility, in the hope that, in the mass, they may accomplish some useful purpose. In combined treatment we employ agencies each of which has been separately tested and found to be of definite value, often to the point of actual cure in the malady to be attacked. And we make use of these various methods in such a manner and in such sequence that they amplify and reinforce each other. Let us remember that Nature recognizes neither the surgeon nor the radiologist, the expert in drugs nor yet the lord of germs. She will put forth her best efforts only when she is assisted without stint. General practice is in reality the only logical form of practice, but no human mind can compass the whole field of medicine. Hence the hope of the future lies in specialism tempered by cooperation.

Finally, we wish to conclude our observations with reference to the application of the roentgen ray to deep seated malignant pathology as follows: that roentgen therapy, as applied at the present time, has been increasingly productive of both more favorable palliative measures as well as permanent final results than was observed by this method in the past. And further, with advancing knowledge, additional improvement in technic and apparatus, and a more thorough understanding of the tissue reactions to known qualitative-quantitative radiations of the roentgen ray and radium, there is every hope that in the near future still greater advances in results will be attained in the treatment of the inoperable as well as in the antioperative and postoperative malignancies.

#### A CASE OF ERYTHROMELALGIA TREATED WITH ADRENALIN CHLORID

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Erythromelalgia was first defined by Wier Mitchell in 1872,<sup>1</sup> again in 1878 and in 1893,<sup>2</sup> when he described the condition as a painful, red state of the limb. Since that time various investigators have contributed to the knowledge of the subject, among whom we find Elsner, Dehio, Rolleston, Osler, Hartzwell, Cassirer and more recently J. J. Ferro.<sup>3</sup> Cassirer<sup>4</sup> was one of the first to describe these conditions elaborately. It is from him we learn that the most common age at which the disease occurs is between 21 and 31, and that it sometimes follows gonorrhea, syphilis, rheumatism, exposure to cold and wet and over exertion; that in sixty-seven cases both feet were affected twenty-four times; both hands were affected two times; one foot affected nine times; one hand affected four times.

Cassirer classifies the disease into two divisions as to distribution: (1) where symptoms are localized in some definite nerve area; (2) where the lesions are distributed over the distal segment of the limb without reference to the nerve distribution, the latter type having as its etiologic factor a disturbance of the vasomotor system.

Boden<sup>5</sup> emphasizes the importance of vasomotor influence in this disease. He found in his case atony and ptosis of the colon and the patient improved when treatment was directed towards relieving that condition. He suggests colectomy in cases where there is atony and ptosis of the colon, which would not only remove the source of the irritating toxins but would break up the sympathetic-medullary re-

1. Philadelphia Medical Times, Nov. 23, 1872.

2. Medical News.

3. Medicina Contemporanea, 37, 380, 1919.

4. Die Vasomotorisch—Tropischen Neurosen.

5. Abstract from Revista Medica del Rosario in J. A. M. A., Feb. 28, 1920.

flex arc as well. The case reported is of the type due to a vasomotor disturbance. It is so classified by reason of the distribution of the lesion and by the response to treatment.

March 25, 1920. W. G., druggist, aged 26, male, white. Chief complaint: Pain in both feet.

Past history: No syphilis nor gonorrhea, no rheumatism, no exposures, nothing in history having any bearing on present condition. While in the Navy one year ago, fell from a ladder alighting on both feet but noticed no pain afterwards.

Family history: Born and reared in the country, no history of syphilis, gonorrhea or rheumatism in family.

Present history: About the middle of February, 1920, patient began having pain in right heel which very quickly extended to the ball, with more or less pain in whole foot; shortly afterward left foot was similarly involved. He only noticed the pain when walking or whenever his feet were hanging down, by elevating feet or lying down the pain could always be relieved. Was treated during this time for flat feet, rheumatism, neuritis, etc., but became worse gradually until he was no longer capable of working and gave up his position. No other joints were involved, no symptoms of respiratory, cardiac, urinary or alimentary disorders; is not nervous and says he has always been healthy. No trouble with teeth or tonsils; is not subject to colds. The pain is intense and burning in character, deep pressure reveals extreme tenderness, can hardly walk without shoes on and only then by walking on sides of feet.

Physical examination, March 15, 1920. Eyes, ears, nose, normal. Throat: No signs of infection, tonsils average size, no tenderness, no pus. Teeth: One or two cavities, no dead teeth, roentgen ray showed no abscesses nor signs of a focal infection. Glands: None palpable. Chest and abdomen showed no abnormalities, heart normal. Genito-urinary tract normal. Arteries: Soft, pulse 78, temperature 98.6, blood pressure, diastolic 60, systolic 90, sitting posture, arms straight out. March 25, blood pressure same. March 27, diastolic 65, systolic 95. Reflexes normal, no Romberg.

Extremities: Feet.—Patient walked with a great deal of difficulty and was unable to extend or flex his feet after resting but following exercise was able to do so. While hanging down both feet were swollen but did not pit; above the color was bright red which fused into a dusky or mottled red below. The red color or swelling did not extend up the legs. The superficial vessels stood out prominently and pulsation could be observed. There was marked tenderness over heels and balls and the right foot had a small trophic ulcer on outer surface of the heel. Feet were moist and felt much warmer than the rest of his body. No loss of sensation. On elevating the feet color became normal, no prominence of vessels noticed and temperature became lower, pain left immediately. There was no evidence of a venous obstruction. Roentgen ray of both feet showed the arch in perfect condition with no evidence of any bone lesions. Hands moist, a moderate hyperadrosis.

Blood examination: Hemoglobin, 95 per cent.; erythrocytes, 4,900,000; leukocytes, 7,500; Wassermann, negative (two examinations).

Urine: Specific gravity, 10:30; no albumen, sugar nor indican. Acid in reaction. No casts. Smear of centrifuged specimen after prostatic massage negative.

Diagnosis, erythromelalgia of the vasomotor type.

In as much as the blood pressure was far below normal on different days with no apparent circulatory cause for it the patient was given adrenalin chlorid 1:1,000 solution, 15 drops three times daily. This was dropped on the tongue and held there as long as possible. After the second dose he noticed marked relief from pain for about two and one-half hours after taking and at the end of three days resumed

his work. On April 19, 1920, patient was greatly improved, working every day but continued to have some pain. He was then started on roentgen-ray exposures, as advised by Sutton<sup>6</sup> which resulted in still further improvement.

May 1, 1920: Blood pressure diastolic, 90; systolic, 125. The adrenalin was discontinued at this time.

May 6, 1920: Patient much worse in both feet, right worse than left. Blood pressure showed diastolic, 80; systolic, 100. The adrenalin was resumed, 5 drops four times daily. He began to feel better at once and has continued to do so to the present date. He is now taking 4 drops of adrenalin three times a day and roentgen-ray exposures every ten days.

The patient is not well but he has been working every day since the treatment became effective and has in three months shown a decided improvement. When we consider the slow recoveries reported, it seems that the use of adrenalin in such cases where blood pressure is low is of a distinct advantage if for no other reason than that it eliminates the necessity of a complete rest.

The roentgen ray has undoubtedly been an effective factor but judging from the rapid change for the worse when adrenalin was discontinued and the marked improvement when it was resumed and the increase in the blood pressure under its use, one feels that the adrenalin has been the more effective agent.

The effect of adrenalin in this case is of marked interest. We know that in disorders resulting from a hyposecretion of the suprarenal gland the artificial supply of its extract will sometimes remedy the disorder. McRae<sup>7</sup> cites a case of a woman complaining of nervousness, with a systolic pressure of 85 to 90, being restored to health after using adrenalin for three months.

I personally recall a case seen in consultation about one year ago of a young man suffering with purpura simplex. He was anemic and complaining of extreme nervousness and weakness. His systolic pressure was below 90. He had been troubled since an operation for an abscessed kidney. Adrenalin was given and within ten days his purpura had disappeared and within three months he reported to his doctor that he had never felt better in his life. The adrenalin was discontinued at this point and he has not been heard from since; I presume he has fully recovered.

The giving of the suprarenal extract undoubtedly relieves the calls made on the suprarenal glands and allows them when in a defective state by reducing their work to recover their normal condition, when they begin functioning once more.

I do not believe that all cases of erythromelalgia will respond so nicely to the use of adrenalin, for there are many different causative agents, but when a low blood pressure is found with no apparent cause other than a disorder of internal secretion, it will be of marked benefit.

6. Sutton's Disease of the Skin, 1916.

7. Low Blood Pressure, Medical Clinic North America, March.



# THE JOURNAL

OF THE

## Missouri State Medical Association

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DECEMBER, 1920

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### EDITORIALS

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#### PROTECTING CHILD HEALTH

The meetings of the American Child Hygiene Association and the Central States Pediatric Society, to which attention was called in the JOURNAL two months ago and which were held in St. Louis, October 11 to 14, were among the most successful medical meetings ever held in the Middle West. Over 350 were registered from some thirty-five different states, including a large number of state and municipal delegates. The meeting room at the Schuyler Memorial was overflowing at all the regular sessions, and over 1,500 people attended the public meeting on Monday night at which Mr. Herbert Hoover made the address. Most of the discussion at the session on prenatal and maternal care centered around the paper by Professor Creadick of Yale Medical School, and considerable controversy arose as to whether the new-born infant should remain under the charge of the obstetrician or be turned over to the pediatrician. In the session on preschool age considerable attention was brought to the question of teeth and the needs and necessity for further health work among children from 2 to 5 years of age. In the session on school age Dr. Charles Hendee Smith of New York discussed the tremendous amount of work that is being done in New York City for children with cardiac disease, and Miss Gillett spoke on the methods and needs of nutritional work among school children. From a medical standpoint the most interesting paper in the joint session on infant care was the one presented by Dr. Louis H. Hempelmann of St. Louis, who discussed the importance of the prevalence of tuberculosis in infancy. On Wednesday afternoon and again on Thursday afternoon the auditorium at the Children's Hospital was packed with physicians and a large number of clinical cases was shown by the staff of the hospital, and on Thursday morning a session was held at St. John's Hospital with a program very largely clinical in nature.

The meeting brought out very strikingly the tremendous interest which is developing both along social and medical lines in the care of

the child. Over forty applications for membership from men in the Middle West specializing in children's work were presented at the Central States meeting. A rather definite change of policy was adopted by the board of directors of the Child Hygiene Association. Mr. Hoover accepted the presidency for the year 1921-1922, and the executive committee has started on a definite campaign to raise \$65,000 for educational work. The membership was increased by a campaign during the past summer from 750 to nearly 2,000. It is planned to develop a campaign to bring at least 10,000 people into the membership of the association who are interested in one or more of the various phases of child welfare. At the present time there are several national organizations doing child health and welfare work and the attempt is being made to bring these various organizations together so that there shall be but one national organization which will serve as a clearing house for this type of work. The meeting was considered the most successful one ever held and there is no question but that the American Child Hygiene Association will develop in its field a position of importance similar to that of the National Tuberculosis Association.

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#### EUGENICS AGAIN

During the period when our activities were along war-like lines small thought was given to the subject of eugenics; but now that we are living again in peaceful times it would seem that that interesting subject is again coming to the front. Among the recent articles on the subject of breeding superior people is the one by Dr. Robert H. Lowie in *The Freeman* (New York), and this article is a timely one, for it brings home to us the futility of attempting so Utopian a change in the world, even though no less a man than Galton started the movement. To better the human race physically and mentally has always been uppermost in the minds of some men, just as it has been when the improvement was along educational lines, industrial lines, and all those other lines to fend mankind against the inroads of disease, discomforts, and the corroding effects of constant toil and toil. Children have been disciplined, educated, their perversities crushed and their outlook made to conform with what was considered normal. Although the majority of us were satisfied with what we thought were endeavors directed so unswervingly that the end achieved would stand the most searching criticism, the nucleus of a small group soon ap-

peared within the larger group of educators and this nucleus demonstrated its dissatisfaction in no mistakable way. Its slogan was that although all our educational methods were good they were not devoid of imperfections: our methods would never be crowned with success so long as we were hampered by physical and mental defects inherited from parents. Even though there were no decided physical or mental defects the obstacles were not negligible, for we were working always and in every case—excepting in a few instances—against heavy odds; we were belaboring the child for no faults of his but for the faults of an unlucky parentage. To be more explicit, we should have mated a high-perfect man with a high-perfect woman and the fruit of the union would have been a product which would have benefited greatly by our educational methods, or rather would have been in such a perfect preparative state that our labors would have been of the lightest. Had not Galton in his book "*Hereditary Genius*" cited those instances where genius being mated with genius the child was exceptional in a mental sense and after this, to him, satisfactory investigation, had he not gone a step further and argued that so long as this was the indisputable outcome in a child endowed mentally far ahead of its friends or acquaintances, would not the same laws apply in case a perfect physical specimen of the male gender was mated to a perfect physical specimen of the female gender and the result desired was a child of perfect physical attributes?

The eugenist has tripped along on his own selected path quite merrily with head erect and shoulders thrown back. He looks at things from Pisgah-heights and sees the Promised Land. But he does not see what is in his immediate neighborhood—the failures which have already resulted from his theories. He points out a few instances which are nectar to his way of thinking, forgetful that the resultant child was not due to his machinations but to the fact that Nature illustrated a lesson which even the most gifted human cannot grasp, for the reason that Nature works in the by-paths, slowly but surely, and then dazzles when least expected. Of course this applies only to the mental parts of a child, not to the physical. But even assuming that the eugenist is on safer ground when he preaches the union of the perfect physical man and the perfect physical woman, is the child an unmistakable counterpart of both parents? It may be healthy—its chances for this are the best; but it may be and often is smaller in stature than either parent and it may

not be able to withstand disease any better than one born of parents who have no physical perfections, provided either of the two scourges—syphilis and tuberculosis—is absent.

Aside from the desire on the part of the eugenist to people the world with perfect physical specimens—and nobody in his right mind would decry these endeavors—what a topsyturvy world this would be indeed, not to say a monotonous world, if the majority of mankind were perfect physical specimens. Brawn and muscle would count for much; health would be so aggressive that the weak and the sick would be shunned like lepers; all society would be restandardized, with muscle and brawn at the head. The weak have no enviable time at present; our sympathy toward them is only too often tinged with contempt. But we have not the courage to show our contempt today, since we might be thought hard, unkind and unfeeling. In the glorious eugenistic days the weak, by an unjust comparison with the superlatively perfect, would be given contempt openly and would be thought so negligible that any attempt on their part to assert their rights would be set down as an abnormal state that would be a decided menace to society. Hence the sanatorium for them, or a farm specially devised to keep them away from the strong.

Brawn and muscle and superior mentality in the end may do incalculable mischief by setting up false standards of might against right, of the hated and justly hated superman against the one who through no fault of his, except that he did not select a eugenist to mate the right father with the right mother, is less capable of entering the battle of life in a full panoply of arrogances that take small note of the only lesson never to be forgotten—humaneness.

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#### THE CRADLE OF DEMOCRACY

The announcement of "school week" by the Bureau of Education at Washington for the purpose of "disseminating accurate information in regard to conditions and needs of schools," brings up the ever present and salient question of the relationship extant between the preliminary grade school education and the practical value which it evinces in the subsequent career of the individual, whether he becomes a business man in the strict sense of the word, or—what interests us most as physicians—a professional unit of the community. The Bureau of Education has designated the week of December 5 to 12 as "school week" and has invited the people throughout the nation to devote themselves to



the discussion of measures that will increase the effectiveness of the schools.

One of the great problems which educators have had to cope with has been the fact that in the past education was placed on a pedestal and accessible only to those of caste and the products of special privilege. With the falling of the Bastille came a realization that the lower strata of humanity could utilize the advantages afforded by an education; and today we are fast approaching the period where community needs and vocational demands are receiving that recognition in school work which has been withheld for so long a time simply because educators, while meandering along the worn paths of custom and tradition, have failed to observe the greater light.

With the constantly changing course of study of the lower schools there comes of course the problem of preliminary requirements for entry into college and university. This pertinent question has aroused its share of spirited and even bitter contention from the pro and con advocates. The tendency nowadays seems to be toward exacting greater requirements from the individual seeking admission to a professional course of study in universities, and there is no denying that this is the wisest course. The opponents of the modern system argue that the germ of genius is imbedded with birth and that therefore those who have aspirations for entry to the higher studies should not be denied this privilege even though they have not completed the preliminaries in the lower grades. But we think this is a fallacious argument and will not stand up under analysis. There are numerous instances not only in history but in present day life of men who have risen to great height against the handicap of limited learning; but these very men usually prove to be the strongest advocates of thorough training in the fundamentals of education preliminary to entering college. Until very recently the college graduate was looked on as a joke when he sought to enter the great industries, and the man who had begun "at the bottom" was much preferred for the head of departments and executive positions—a perfectly natural state of affairs when we recall that entry to a college in the past was regarded as a right belonging to the privileged classes irrespective of the preliminary qualifications attained by the aspirant. Today we find the transition to have passed almost to the state where efficiency in business and professional life is gauged very much by the amount of systematic and technical training which an applicant has obtained by general and special courses at

some seat of learning. The formerly common railroad president or other captain of industry who was a trackwalker or newsboy is becoming a rare oddity. There is therefore all the more reason for the professions to begin taking stock of their requirements and tally them up in proportion with the newer curriculums that are constantly being instituted in the public schools. There is being waged a continual campaign of elimination in all courses of study throughout the states, the aim being to discard that which smacks of the useless and traditional and replace them with strictly utilitarian units that will go toward helping the individual in the great struggle which awaits his entry into the seething cauldron of man's estate.

Wars are usually looked upon, and justly so, as horrifying experiences, but there is no denying the compensatory phase that follows in the wake of destruction, such as the great waves of rehabilitation that roll over those fields of endeavor which the struggle had proven to be deficient. Nearly all wars have been followed by strong intellectual awakenings and the recent cataclysm is no exception, for it brought home to the government the horrifying condition of illiteracy and physical deficiency manifested almost universally throughout our country, among old and young, rich and poor.

After all is said, however, there still remains the query, what is a grade school education worth? Manifestly if it is not sufficiently potent to bring a pupil to the doors of a university it has at least the supreme virtue of producing a real American; it being rather difficult to surmise how Americanism could be instilled into one who has not had at least that much systematic training nor passed through the democratizing influence of the common school; for the public schools are, when properly conducted, the symbolical cradle of our democracy.

Our immortal constitution was written for the express purpose of conserving our right to life, liberty and the pursuit of happiness; and yet it is only of recent years that humanity is coming to a realization of the fact that none of these factors may be enjoyed with fullness unless one has a certain amount of education. It must be evident to the most skeptic mind, on analyzing the subject, that the illiterate has a very poor chance of attaining life in abundance; and we are having only too many examples of how illiterates abuse the privilege of liberty by manifestations of rowdiness, sabotage, and other maniacal upheavals by I. W. W. advocates, Bolsheviks and anarchists, to doubt the stabilizing influence of an education begun in early life.

And as for that hypothetical denouement termed happiness, it is a state so promiscuously abused and so indiscriminately invoked, that to reason an illiterate in or out of it might inadvertently lead us into a quagmire of philosophic dispute; therefore we will evade laying ourselves open to the charge of cynicism by suggesting that if the cultured individual does not find it a simple task to hold this elusive factor in his grasp for long, how can the illiterate ever come to an understanding of what constitutes that unstable condition?

While noble men and women have been standing by their colors, underpaid and underfed, many communities have wallowed in the quagmire of graft and illiteracy. Yet these patient teachers have felt no bitterness in their hearts against school boards that have doled out a pittance barely sufficing for subsistence and used not infrequently to aid in supporting invalids in the family. But the day of reckoning is here. The guardians of the cradle of democracy have been imposed on too long. They are fast leaving the paths of starvation for those offering lucrative compensation. They have been fed up on idealism to the point of indigestion. Government reports are calculated to bring a sense of uneasiness to the most phlegmatic and optimistic, for teachers are deserting in large numbers, with none to take their places.

As an organized medical profession we can aid the government in its fight against illiteracy and parental neglect of the physical and mental development of the child. The week of December 5 to 12 is a propitious time for county societies and members individually to discuss the value of educating the children of the community to the highest possible point within their reach. The question of public health is fast being linked with common school education until in the near future it is hoped that they will be integrally united. Manifestly it is the duty of all progressive physicians to begin evincing more interest than they have in the past in all matters concerning the public schools. We cannot censure pedagogues for neglecting the salient factor of hygiene unless we endeavor to bring home to educators the necessity for such attention.

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#### MORBIDITY REPORTING BECOMES EFFECTIVE IN MISSOURI

Beginning Saturday, December 11, physicians will be required to report all cases of diseases designated by the state board of health as "infectious, contagious, communicable or dangerous." This law was passed by the Fiftieth Gen-

eral Assembly and the board has established a system of reporting communicable diseases and issued the necessary blanks and instructions. The attending physician is held responsible for making the report to the health officer. In cases where no physician was in attendance the head of the household is responsible. Failure to make report is punishable as a misdemeanor.

Every physician knows that adequate control of disease is utterly impossible without morbidity reports. Many outbreaks of communicable disease could have been eradicated in their incipency if the first few cases had been reported so that a health officer could investigate the probable source of infection before the disease had reached epidemic proportions. Hitherto the board had no authority to enforce its regulations governing morbidity reports, although ordinances were effective in some of the larger cities for cases occurring within the limits of those cities.

This new statute permitting the standardization of the state health department puts Missouri in position to cooperate fully with the U. S. Public Health Service and therefore entitled to receive the benefits of federal assistance in the control and prevention of disease. Only those states which have organized their health departments along lines that accord with modern ideas of combatting disease are entitled to the cooperation of the U. S. Public Health Service, the value of which cannot be overestimated. Missouri has, however, been fortunate in this respect, for the Public Health Service, on the invitation of the state board of health, has assisted the board to establish a division of child hygiene and a division of venereal diseases and both of these branches of the board's activities have accomplished exceptionally valuable results. The men and money to conduct these divisions were drawn from federal sources and practically loaned to Missouri to demonstrate what can be done for the improvement of health conditions by a small body of trained men and women and a small sum of money. If we are to receive the continued support of the federal department we must encourage the next general assembly to appropriate money for the maintenance of these divisions and the Public Health Service will match that amount with a contribution from the funds appropriated by Congress. Through such cooperative efforts of the state and national governments Missouri ought to have within the next two or three years a well organized health department functioning without friction for the protection of the health of the people. Morbidity reports are essential fac-



tors of health protection and therefore we hope physicians will respond to the requirements of the board to send in their reports promptly.

The following diseases are declared reportable: Anthrax, chickenpox, chancroid, diphtheria, glanders, gonorrhea, influenza, leprosy, measles, meningitis (epidemic cerebrospinal), mumps, ophthalmia neonatorum, plague, poliomyelitis (acute anterior), rabies, scarlet fever, smallpox, sore throat (epidemic or septic), syphilis, tetanus, trachoma, tuberculosis, typhoid fever, typhus fever, whooping cough.

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#### BELGIUM TO AMERICA: WASHINGTON UNIVERSITY SCHOOL OF MEDICINE SUPREME

Now that the trials and tribulations incident to the Great War are over and men are turning their thoughts to matters which breathe peace and a desire to make education so international that a complete knowledge of foreign countries shall obtain, it is meet that considerable should be written on this subject, not only to remind the nations of the world that things as they were heretofore in the educational world were faulty, but to instruct all peoples in regard to the advantages of a broader education that shall be inclusive of the why and wherefore of the educational methods in the various countries and the ethnologic reasons for what were formerly called "peculiarities." This can only be effected by a long sojourn in the various countries, with eyes open and minds not only receptive but retentive. But even when sojourns of many months are impossible, much can be gained in another way—a way that is perhaps just as effective, since it brings home to those who cannot spend months abroad the best thought of a foreign country through the medium of that country's representative men as lecturers and visitors. When to the art of the lecturer there is added his desire to learn that which is new to him and may be of profit to his country on his return, the results of internationalism cannot be questioned but are, beyond the shadow of a doubt, of benefit not only to the country he visits but also to his native land.

A case in point was the recent visit of a party of distinguished Belgians to Washington University School of Medicine, not only to meet the heads of that institution in the spirit of friendship but to study its buildings, to learn its workings, and to acquire such knowledge of its conduct so that on their return home they would be in the position to tell the authorities just what was needed of modernness in the re-

establishing of the medical school at Brussels. That the party of Belgians was distinguished need not be expatiated on here: their names indicate their high position in the province of medicine unrestricted by Belgium. Dr. Antoine Depage needs no introduction to our readers, since his fame as a Belgian surgeon is unquestioned and his activities during the war as head of the Belgian Red Cross made him known to all those American physicians who were fortunate enough to meet him while in service overseas; Dr. Jules Bordet, who recently was awarded the Nobel Prize in medicine for 1919, is known throughout the world of medicine as part discoverer of the Bordet-Gengou bacillus, a minute ovoid organism supposed to be pathogenic in whooping cough, and also of the Bordet-Gengou phenomenon, a test to determine whether or not serum contains amboceptors or intermediary bodies, and who recently established the fact that the union of a toxin with an antitoxin was physical rather than chemical; Dr. René Sand, secretary of the University Fund of Belgium and the leading authority on public health measures, and Dr. Albert Dustin, professor of pathologic anatomy at the University of Brussels and a noted neurologic surgeon.

When a medical school in this country is visited by so distinguished a group of foreigners, it behooves us to take note and ask ourselves a number of important questions in connection with so momentous a visit. Are we not approaching a more perfect state of amity? Are we not effecting a rapprochement that must lead to a great deal of good to us and the visitors? Are we not learning and giving a most important lesson at one and the same time? No matter if these men inspected a number of schools throughout the country, the fact that they fastened their attention on Washington University School of Medicine means much to our civic pride and should redound to the reputation of our city. But when it is written large that after inspecting this school they pronounced it superior to any they had studied, then indeed our civic pride has a right to be a bit dizzy.

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#### MONTREAL MEETING OF AMERICAN HOSPITAL ASSOCIATION

Almost 500 hospital workers journeyed to Montreal to attend the twenty-second annual meeting of the American Hospital Association held in that city October 4-8. In conjunction with the regular meetings of the Hospital Association the American Association of Hospital Social Workers held their meeting.

The program was very interesting and in some respects unique. Heretofore it has been the rule to have papers dealing with such matters as per capita cost, the best floor covering, the care of paint in the hospital, and all sorts of housekeeping problems. A glance at the program of the Montreal meeting lends convincing evidence that the hospital has at last lined up with the greatest of all the fields of modern medicine, viz., preventive medicine. Rural health problems, dispensary work, industrial clinics and hospital problems, social service work, and public health discussions, led the way.

The discussion of the present day nursing and training school methods was very interesting, plainly indicating that something is radically wrong in this branch of hospital work. It was the opinion of many speakers, both hospital superintendents and training school heads, that a complete rearrangement of selecting, teaching and training nurses is necessary, and at once. This was especially reflected in the questions put by the chairman at the round table conference where the discussion was animated, and in some instances questions voted on, by a large number of members and delegates.

In selecting Montreal as a meeting place the committee displayed good judgment. The metropolis of Canada, standing high among the great cities of this continent, beautifully located on an island formed by the confluence of the St. Lawrence and Ottawa rivers, rich in early Canadian history, the seat of power for a great church, the home of several splendid hospitals—it furnished many points of interest not to be found in any other city for the entertainment of members and delegates.

A stream of visitors found great interest in Chateau de Ramezay, Notre Dame Church, Bonsicours Church and Market, St. James Cathedral, Hotel Dieu, the oldest hospital on this continent, and the splendid Royal Victoria and Montreal general hospitals. The weather was cool and delightful—a circumstance that leads us to hope the plan of meeting late in summer will be continued.

#### A NEW JOURNAL AND A MISSOURI PUBLISHER

The C. V. Mosby Company of St. Louis, medical book publishers, announce the establishment of the *American Journal of Obstetrics and Gynecology* which will represent the American Gynecological Society, the American Association of Obstetricians and Gynecologists,

and the obstetrical societies of New York, Philadelphia and Brooklyn. This will be the only journal published in the English language devoted to obstetrics and gynecology and will rank with the principal publications produced in foreign countries. In France and Italy the several publications limited to these specialties have been consolidated so that there is only one such journal in each of those countries, while in Germany there are four journals recognized as standard mediums in these two subjects. The opportunity is thus presented to the Mosby Company to foster the growth of a periodical for obstetricians and gynecologists that will record the latest scientific progress by these specialists throughout the English-speaking world.

The first number of the *American Journal of Obstetrics and Gynecology* makes a definite impression in its favor, not only from its appearance and general make-up but the personnel of the editorial control gives assurance that it will be a superior medium. Dr. George W. Kosmak of New York is the editor and Dr. Hugo Ehrenfest of St. Louis associate editor. Assisting these gentlemen is an editorial board of thirty-three others who have attained eminence in this field, among whom we note the following Missouri physicians: Drs. H. S. Crossen, George Gellhorn and Henry Schwarz of St. Louis.

The Mosby Company has built up without much noise or fuss a medical publishing house in St. Louis that has won the admiration and approval of the entire medical profession of the state and country. The imprint of the Mosby Company appears on many of the most important contributions to the science of medicine of today, not only in book form but in the field of medical journalism. Through their assistance Missouri physicians have begun recording the fruits of their experience in more permanent form than the recital before societies of a few scattered happenings could give them—a duty to the profession that has been too long neglected by our representative men. Our commendation of the enterprise and progressiveness of this Missouri company does not end here. We have one more word of praise for the Mosby Company, namely, that in the production of journals on medical and allied sciences—five now bear the Mosby imprint—they have adhered strictly to the rules of the Council on Pharmacy and Chemistry of the American Medical Association in their advertising departments, thus supporting the organization effort to clean up the advertising end of medical journalism and keep it clean. The subscription price of the *American Journal of Obstetrics and Gynecology* is \$6 per



annum, a very low figure when the importance of the publication is remembered. Those desiring to subscribe to the journal should send their subscriptions to the publishers, the C. V. Mosby Company, Metropolitan Building, St. Louis, but original articles and communications relating to the editorial management should be addressed to the editor, Dr. George W. Kosmak, 23 East Ninety-Third Street, New York.

## BOOKS FOR LEISURE MOMENTS

*Reading with discrimination broadens the mind  
and strengthens the mental grasp*

IT may have been your good fortune to have read only autobiographies of so high a degree of excellence and so decidedly divorced from conceit that the reading thereof brought only pleasure and the sense that, after all, men and women when they write the story of their life refrain altogether from gazing in the mirror and admiring their unusual qualities of head and heart. We say it may have been your good fortune; but we doubt it, for the reason that very few autobiographies have this enviable quality. A book of personal reminiscences with a deal of autobiography has recently come to our desk, and it was with some misgiving that we took it up, for again the thought assailed us that here was another autobiography cast on the lines which have always been objectionable to us. But our misgiving soon vanished; the book held our interest; its modesty was its best note. Reference is here made to "Rambling Recollections," by Dr. A. D. Rockwell (Paul Hoeber, New York), an autobiography of such engaging qualities that be the reader a physician or a layman he must at once realize that he is opposite the portrait of a man of all those qualities which from time immemorial have held the attention of all intelligent people—modesty, candor, humor and a keen eye to detect the foibles of human beings. Starting with village beginnings and intimate pictures of his home life and then proceeding by easy stages to his professional career in New York, Dr. Rockwell is always the optimist and always the sort of man one would want to meet, for evidently his mind is not moved to enthusiasm by great wealth or nobility of birth. No frills or furbelows in the jotting down of his daily experiences are evident to blind the reader to the real makeup of the author, and no affectations due to a lucrative practice after some years in New York mar the character of a man who was always true to what his family had taught him and to what his

early environment had indelibly impressed on his mind. Aside from these good, and we might say unusual, qualities in autobiographical writing, the book has a literary finish that will surprise all those physicians who for years have been of the opinion that when a doctor writes "outside medicine" he invariably makes a mess of it from a literary standpoint. Hence the recommendation of this book to all our medical readers is one that we give willingly, and also its recommendation to all those who are not physicians for the additional reason that no technical terms bestrew its pages to baffle him who is not inured to medicine. The life of every man has certain points of interest and every man has a Boswell hanging around who after his death either overpraises him or maligns him; but it is given to few to be so well equipped to write their own story in terms of such modesty that a truthful picture is evolved. And the picture we have here is not only a truthful and engaging one of a lovable man but of New York in the seventies, eighties and nineties of last century. Here is the metropolis shorn of all its "newspaper" glamor, with points similar to any other American city that boasts a large population. And as for the people—"prominent" physicians, philanthropists and millionaires—they come in for some kindly criticism and also for some unkindly, though the latter is never harsh. The panorama unrolled before us is an interesting one and an instructive one, and the names of the so-called celebrities of the latter half of last century, while not completely shorn of their glamor, are not the names we would hold today in fear lest our lesser qualities should prevent us from approaching the bearers as one human being approaches another, in natural and good fellowship.

P. S.

## NEWS NOTES

DR. WILLIAM T. COUGHLIN of St. Louis has been appointed director of the department of surgery of the St. Louis University Medical School.

DR. JOHN R. CAULK of St. Louis was elected chairman of the surgical section of the Southern Medical Association at the recent meeting held in Louisville.

DR. T. GUY HETHERLIN of Louisiana suffered a fracture of the forearm and dislocation of the elbow when his automobile "kicked" while he was cranking it.

DR. ISAAC D. KELLEY, JR., of St. Louis, was married to Mrs. Lacy Love, daughter of Mrs. William Cullen McBride of St. Louis, on Wednesday, November 3.

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DR. VILRAY P. BLAIR of St. Louis, who gained international fame in plastic surgery during the war, was severely injured in an automobile accident November 12.

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THE child hygiene division of the state board of health has begun a health survey of St. Joseph under the direction of Dr. C. P. Knight, director of the division of child hygiene.

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DR. J. D. GRIFFITH, chief of the staff of the St. Joseph Hospital, Kansas City, has established a clinic at the hospital for the treatment of all diseases. A staff of forty-two physicians will have charge of the clinic.

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DRS. BRANSFORD LEWIS AND NEIL MOORE of St. Louis announce dissolution of partnership in their practice. Dr. Moore has established offices at 316 Frisco Building, St. Louis, Dr. Lewis remaining at 550 Century Building.

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ANOTHER suit for malpractice against one of our members was settled recently when the court declared that the plaintiff's evidence failed to show that he had any grounds for action against the physician and dismissed the case.

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DR. ELSWORTH SMITH of St. Louis was elected president of the Mississippi Valley Medical Association at the meeting held in Chicago, October 26-28. About 100 members were present. The 1921 convention will be held in St. Louis.

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THE new building at St. John's Hospital, St. Louis, to be used as a nurses' home is nearing completion and will soon be ready for occupancy. This addition to the facilities of the hospital will increase the number of beds available for patients to about 275.

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THE Jackson County Medical Society will present a banner to the Fitzsimmons Post. This post was named in honor of the late Dr. William Thomas Fitzsimmons, a member of the Jackson County Medical Society, the first officer killed in the late war with Germany.

DR. R. C. PERSON of Omaha, formerly associated with Dr. Harold Gifford of Omaha, has formed a partnership with Dr. F. R. Anthony of Maryville, Mo., under the firm name of Drs. Anthony and Person. Their practice will be limited to diseases of the eye, ear, nose and throat.

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ST. LOUIS physicians engaged in tuberculosis work have formed a club which will be known as the Robert Koch Club as a tribute to the discoverer of the bacillus of tuberculosis. The organizers of the club are members of the medical advisory staff of the St. Louis Tuberculosis Society.

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DR. GEORGE B. TRIBLE, Commander of the Medical Corps, U. S. Navy Hospital, Washington, D. C., was a visitor in St. Louis on November 9, and remained there for several weeks. During his stay Dr. Tribble spent some time inspecting the surgeons taking postgraduate courses in diseases of the eye, ear, nose and throat at the Washington University Medical School.

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A PRIZE of \$100 has been offered to the Jackson County Medical Society to be awarded to the author of the most meritorious paper read before the society during the year (September, 1920, to June, 1921). The name of the donor is not disclosed but it is stipulated that the winner must be a member of the Jackson County Medical Society and in practice ten years or less.

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THE Physicians and Surgeons Adjusting Association of Kansas City now issues free membership certificates to physicians patronizing the company's collection service. The idea is proving attractive, according to Mr. F. F. Hoard, the controller of the company, who says that "merchants and others form associations for mutual protection against delinquent debtors and that his company provides much the same service for medical men." Their announcement in the advertising pages is self-explanatory.

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THE dental school of the St. Louis University will organize a unit of the Reserve Officers' Training Corps of the United States Army with Major Robert W. Kerr, U. S. A. Medical Corps, in charge. The War Department has assigned Major Kerr to St. Louis University where he will occupy the position of professor of military



science and tactics. In the future vacancies in the dental corps of the Army will be filled by graduates from schools having a reserve officers' training corps, only ten such schools in the country being eligible for the establishment of these corps.

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THE council of the visiting staff of St. John's Hospital, St. Louis, recently adopted the following requirements relative to the compiling of records and recommended their adoption by the hospital authorities. The requirements follow:

1. Record of each patient shall be taken to the operating room with the patient.
  2. That each operator be required to inscribe on this record the diagnosis before operation.
  3. That the operator shall write or dictate the operative findings immediately after operation.
  4. That no surgeon who refuses or neglects to carry out these rules shall be permitted to operate on a patient.
  5. That the supervisor of the operating room shall be responsible for the enforcement of these rules.
  6. That the historian notify the attending physician of any omission, error or incompleteness of records.
  7. That one week's time be given for the attending physician to correct or complete the records.
  8. That any physician who refuses or neglects to do this shall be denied the use of hospital.
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As we go to press the arrangements for the postgraduate meeting at St. Louis approach completion. Practically every hospital of prominence in the city organized its staff to present material in all branches of medicine for demonstration to the visiting physicians. Two out-of-state speakers were invited to address the gatherings, Dr. Dennis R. Crile of Chicago, delivering a lecture on "Conservative Treatment of Fractures," on November 22. Dr. Crile was in France for three years during the late war and gave special attention to the treatment of fractures. Dr. Harlow Brooks of New York, addressed the gathering on the evening of November 23, his subject being, "Syphilis of the Heart." He has attained a position among internists in the country that makes him an authority on internal medicine and the subject chosen is one that holds great interest for all practitioners.

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THE National Research Council has established a Research Information Service as a general clearing-house and informational bureau for scientific and industrial research. This "Service" on request supplies information concerning research problems, progress, laboratories, equipment, methods, publications, personnel, funds, etc. Ordinarily, inquiries are answered without charge. When this is impossible, be-

cause of unusual difficulty in securing information, the inquirer is notified and supplied with an estimate of cost. Much of the information assembled by this bureau is published promptly in the *Bulletin* or the "Reprint and Circular Series" of the National Research Council, but the purpose is to maintain complete up-to-date files in the general office of the Council. Requests for information should be addressed, Research Information Service, National Research Council, 1701 Massachusetts Avenue, Washington, D. C.

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THE Census Bureau's annual bulletin on mortality statistics for the death registration area in continental United States, which will be issued shortly, shows 1,096,436 deaths as having occurred in 1919. This represents a rate of 12.9 per 1,000 population, and is the lowest rate recorded in any year since the establishment of the registration area. The rate for 1919 is in striking contrast with the unusually high rate for 1918, due to the pandemic of influenza, which was 18 per 1,000. This is a drop of 5.1 per 1,000 population. The death registration area in 1919 comprised thirty-three states, the District of Columbia and eighteen registration cities in nonregistration states, with a total estimated population of 85,147,812, or 81.1 per cent. of the estimated population of the United States. The states of Delaware, Florida and Mississippi were added to the area in 1919 and Nebraska in 1920, so that now the only states not in the area are Alabama, Arizona, Arkansas, Georgia, Idaho, Iowa, Nevada, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, West Virginia and Wyoming. The territory of Hawaii is part of the registration area, but the figures given in this summary relate only to the area in continental United States.

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THE Medical Protective Company of Fort Wayne, Ind., announces that it is now providing added indemnity for the protection of the physicians where desired. The company has just completed statistics on the amount of money involved in judgments that have been rendered in the past few years and finds that the number of judgments in excess of \$5,000 in 1915 was a little over 1 per cent. while in 1920 the ratio of judgments in excess of \$5,000 was a trifle less than 54 per cent. This indicates that courts and juries are now assessing higher damages against physicians found guilty of malpractice than they did in 1915. The Medical Protective Company has met this situation by preparing an

added indemnity clause increasing the amounts available for the payment of judgments to \$10,000 in a single case and \$30,000 in any number of suits growing out of services rendered in any one year. The premium for this additional protection will be \$6, making a total premium of \$21 for indemnity in the larger amounts. Physicians whose policies are now limited to \$5,000 and \$15,000, respectively, may take advantage of this enlarged protection by having a rider attached to their present policies on the payment of the extra premium of \$6.

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THE Children's Code Commission recently appointed by Governor Gardner held a meeting at St. Louis, October 15, and outlined its work for the coming session of the legislature. The chairman of the commission, Judge Rhodes E. Cave, suggested that the legislative program should be limited to pushing the passage of bills that were not adopted at the Fiftieth General Assembly, and amend some of those which were enacted in order to remove serious opposition where it could be done without impairing the vitality of the measures, and make necessary changes to put the laws in harmony with recent advancements. The suggestion of the chairman was adopted and plans were formulated to work along these lines. The executive committee of the State Federation of Women's Clubs notified the Commission that the Women's Clubs would make the work of the Children's Code Commission the major part of their legislative program. Col. J. A. Corby was appointed chairman of the executive committee; Mrs. L. O. Hocker, chairman of the finance committee, and Mr. J. L. Wagner, chairman of the committee on codification of laws. The executive committee of the Commission was requested to meet at Sedalia during the session of the Missouri Conference for Social Welfare, November 14-16.

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ST. LOUIS UNIVERSITY, the oldest seat of learning west of the Mississippi River, has for the first time in its more than a century of endeavor made a public appeal for funds, the larger portion of which are to be applied to the support of the college of medicine and dentistry. The university has asked its alumni and friends to raise the sum of \$3,000,000 as a Centennial Endowment Fund, in commemoration of the 100th anniversary of the founding of the institution. The anniversary occurred in 1918, but because of war conditions existing at that time, with over 3,000 of the undergraduates and

alumni having answered the call to arms, the celebration was postponed until conditions were more nearly normal. St. Louis University holds the distinction of having established in the great Louisiana Purchase tract the first colleges of medicine, dentistry, law and commerce. Its college of dentistry is the only one in Missouri of Class "A" rating, and together with the medical college has so expanded that outside aid in the form of an endowment fund is imperative in order to provide proper salaries for the teaching staff and proper facilities for the two departments. It is hoped by the faculty that old graduates of the medical and dental college of the university, who are now scattered all over the world, will appoint themselves a committee of one to aid their alma mater to realize the Centennial Fund.

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THE American Medical Association has increased the annual dues in that body from \$5 to \$6, effective Jan. 1, 1921. At a special meeting of the House of Delegates held at Chicago, November 11 and 12, Dr. Simmons presented data showing that the increase in the cost of paper from 1918 to 1920 was \$3.50 per 100 pounds, and the cost of labor had increased \$23 a week for compositors, pressfeeders and pressmen. According to the statement of Dr. Simmons the cost of paper for *The Journal of the American Medical Association* for twelve months at the rate *The Journal* is now paying, would be \$59,500 more than it cost at the beginning of 1920, and that labor would cost \$38,060 more in 1921 than in 1920. This increase in wages for labor does not cover all the increase, because the figures do not include the higher amounts paid to bindery help, machinists, porters, and general help in the printing department, all of whom have had increases since 1918. Very many of the state medical associations have increased their annual dues in order to keep up with the high costs of maintaining their organization endeavors. The St. Louis Medical Society has a proposition before it to increase its dues to \$15 per annum, and the Jackson County Medical Society is considering increasing its dues to \$22 per annum for active members who will enjoy library privileges. The proposition in Jackson County involves taking over as medical society property, the library hitherto conducted as a separate body and supported by individual subscriptions. The St. Louis Medical Society has owned and conducted its medical library for a number of years and all active members have access to it as one of the privileges of membership.



# MEMBERSHIP CHANGES, NOVEMBER

## NEW MEMBERS

Amos, Omar E., 227a E. High St., Jefferson City.

Bowen, Cyrus W., 101 E. Broadway, Brunswick.

Connell, Evan S., 608 Commerce Bldg., Kansas City.

Dallas, Hugh G., Central Trust Bldg., Jefferson City.

Floyd, Frank W., 4390 Lindell Blvd., St. Louis.

Fuson, Levi H., 120 S. 7th St., St. Joseph.

Gray, John M., Chitwood.

Herrick, Harold C., Metropolitan Bldg., St. Louis.

Hunter, James R., 5800 Arsenal St., St. Louis.

Jeffries, Roy R., St. Luke's Hospital, St. Louis.

Kistner, Paul F., 6104a Easton Ave., St. Louis.

Koppenbrink, Walter E., Higginsville.

Lawton, Thomas P., 2321 University St., St. Louis.

LeSaulnier, Edward B., Eureka.

McGrath, John N., St. John's Hospital, St. Louis.

Murphy, Frank E., St. Luke's Hospital, St. Louis.

O'Connell, Patrick B., City Hospital, St. Louis.

Sample, Roy O., Medical Bldg., Clayton.

Seehorn, Newton A., 215 New Centre Bldg., Kansas City.

Strub, Herbert J., City Hospital, St. Louis.

Titterington, Paul F., 4224 Washington Ave., St. Louis.

Vieregg, Frank R., 203 Askew Ave., Rose-land, Neb.

Wenzel, Peter S., 5812 Delmar Ave., St. Louis.

Winn, William M., 410 Metropolitan Bldg., St. Louis.

## CHANGES OF ADDRESS

Borck, Henrietta A. S., 3928 N. 20th St., St. Louis, to 4308 N. 20th St.

Bothman, Louis, 333 University Club Bldg., St. Louis, to 6630 Bartmer Ave.

Bryan, Richard S., 1354a Belt Ave., St. Louis, to 3965 Shaw Ave.

Calvert, Howard A., Smithville, Mo., to Chickasha, Okla.

Cecil, George E., Ardmore, to Flat River.

Clancy, James F., 3504 Halliday Ave., St. Louis, to University Club Bldg.

Dallwig, Leon E., 2702 Lisbon Ave., Milwaukee, Wis., to 263 34th St.

Dean, James R., St. Louis, to St. Vincent's Hospital, Los Angeles.

D-Menil, Henry N., 4103 Easton Ave., St. Louis, to 3753 Cook Ave.

Drake, George S., Jr., 404 Humboldt Bldg., St. Louis, to 3800 Lindell Ave.

Eber, Carl T., Northwestern Bank Bldg., St. Louis, to 2008 St. Louis Ave.

Edwards, Thomas B., 2603 S. Broadway, St. Louis, to 508 Times Bldg.

Ellis, Ralph V., 4246 Arsenal St., St. Louis, to Morrisville.

Eyermann, Charles H., University Club Bldg., St. Louis, to 401 Humboldt Bldg.

Farber, Mark J., 416 Corby Forsee Bldg., St. Joseph, to 109½ W. 8th St.

Feinstein, Leon A., 5886 Easton Ave., St. Louis, to 313 Chemical Bldg.

Gaertner, C. Walter, 3840 Russell Ave., St. Louis, to 7606 Michigan Ave.

Geistweit, William H., Jr., St. Louis, to 104 E. 85th St., New York City.

Glenn, Joseph E., Washington, D. C., to R. R. No. 2, Sparta, Ill.

Gorham, Frank D., 405 Humboldt Bldg., St. Louis, to 406 Lister Bldg.

Hamilton, George McC., Thompsonville, Ill., to Dexter, Mo.

Hedges, Frank, Pattonsburg, to 3626 Independence Ave., Kansas City.

Hein, Emil E., Grand and Arsenal Sts., St. Louis, to 3887 Utah Place.

Hoberecht, Carl A., New Orleans, to 69 Pinckney St., Boston.

Holt, Samuel W., Rutledge, Mo., to 1303 Prytonia Ave., New Orleans.

Howe, Elmer D., 306 Humboldt Bldg., St. Louis, to 5130 N. Broadway.

Knott, Minerva M., Sedalia, Mo., to Jackson, Miss.

Kuhlmann, Frederick C. E., St. Louis, to 2106 W St. N. W., Apt. 22, Washington, D. C.

Kurtzeborn, Edwin E., 3532 Washington Ave., St. Louis, to 3526 Washington Ave.

Langsdorf, Herbert S., City Hospital, St. Louis, to Hill Bldg., Jefferson and Gravois Aves.

Lee, Elbert J., New York City, to 11 S. Broadway, St. Louis.

Lowe, Horace A., 1020 Landers Bldg., Springfield, to 512 Woodruff Bldg.

Lucas, Harold R., Joplin, Mo., to 220 Medical Bldg., Portland, Ore.

McGennis, Patrick, New York City, to 6104a Easton Ave., St. Louis.

Mehan, George T., 312 Nicholas Bldg., St. Louis, to 1006 S. Jefferson Ave.

Mercer, Ray, Canton, Mo., to Stern Bldg., Quincy, Ill.

Mestemacher, Louis H., 2903 Barrett, St. Louis, to 2330 N. Union Ave.

Miller, Charles W., Herculanum, to 634 University Club Bldg., St. Louis.

Moore, Neil S., 550 Century Bldg., St. Louis, to 316 Frisco Bldg.

Padberg, Louis R., 3630 S. Grand Ave., St. Louis, to 3819 S. Grand Ave.

Pickett, Clarence P., 314 Ash St., Jefferson City, to 508 Central Trust Bldg.

Osborne, George, Mound City, to Box 303, Pleasant Hill.

Raithel, G. Herman, 2901 St. Louis Ave., St. Louis, to 4014 De Tonty St.

Rhea, Clarence W., Forney, Texas, to 4154 De Tonty St., St. Louis.

Robinson, G. Canby, St. Louis, to 211 W. Madison St., Baltimore, Md.

Ryburn, John P., City Hospital, St. Louis, to 1285 Hodiamont Ave.

Scherck, Henry J., 614 Century Bldg., St. Louis, to 846 Century Bldg.

Summa, Henry H., 4236 W. Florissant Ave., St. Louis, to 1101 Salisbury St.

Wessling, Frederick J., Rocky Mount, Star Route, to Eldon.

Wilson, Frank N., St. Louis, to Union Hospital, Ann Arbor, Mich.

Witten, Henry O., St. Peter, Minn., to % State Hospital, Anna, Ill.

#### RESIGNED

Cooley, Edward L., St. Louis.

Wyer, Harry G., St. Louis.

### OBITUARY

#### EDWIN S. McDONALD, M.D.

Dr. E. S. McDonald of Cameron, a graduate of the Northwestern Medical College of St. Joseph, Mo., 1882, died suddenly of angina pectoris while sitting in the railroad station at Cameron Junction, aged 71 years. Possessed of a brilliant mind and a constant reader of good literature Dr. McDonald was not only an up-to-date physician but interested himself in the affairs of the community which promised better conditions for healthful living. He was not a member of the county medical society at the time of his death but had been a member until a few years ago. He was local surgeon of the Rock Island Railroad and a member of the Railway Surgeons Association and had served as its president.

#### DAVID GORDON, M.D.

Dr. David Gordon of Chillicothe, one of the pioneer physicians of Northwest Missouri, died at his home, Oct. 6, 1920, of paralysis, aged 70 years. He was born on a farm near Chillicothe and attended the public schools and the

state university. His medical education was obtained at the University of Louisville from which he graduated in 1877. He returned to his home where he practiced continuously until three years ago when failing health compelled him to retire. He was a member of the county medical society for many years, taking a prominent part in the activities of the organization not only for the advancement of medical standards but played a leading part in public affairs, having served as mayor of Chillicothe for two terms.

#### JOHN M. TRACY, M.D.

Dr. J. M. Tracy of Mound City, one of the oldest physicians in the northwest section of the state, died at his home, Sept. 12, 1920, aged 82 years. He was born in Indianapolis where he received his early education and came to Missouri in 1858 locating in Bates County. There he taught school and "read" medicine under Dr. Rockwell, later going to the Eclectic Medical College, Cincinnati, from which he graduated in 1873. He was not satisfied with this amount of college work, however, and took further courses at Ensworth Medical College, St. Joseph, and in the hospitals of New York, taking special courses in diseases of the eye. He was a member of the Holt County Medical Society and was always in the forefront of movements looking to the improvement of medical matters as well as public health interests. One son, Dr. J. C. Tracy, is a practicing physician at Mound City.

#### WALTER A. CAMP, M.D.

Dr. W. A. Camp of Springfield, the first specialist in diseases of the eye, ear, nose and throat to locate in that city, was seized with an apoplectic stroke on September 24 while preparing to operate on a patient at Burge Deaconess Hospital, and died in a few minutes. He was 66 years of age and had practiced in Springfield for almost forty years. He graduated from the Emory University School of Medicine, Atlanta, Ga., in 1878, and attended lectures at the College of Physicians and Surgeons in New York City, and then came to Missouri. He was widely known, universally admired and esteemed and very skilful in his specialty. He took an active part in medical society affairs, holding membership in the Greene County Medical Society and the State Association and in several special societies. He was oculist on the staff of the Frisco Hospital. A son, George, recently graduated from his father's alma mater and is now taking post-graduate work in New York.

#### JOHN J. MILLER, M.D.

Dr. J. J. Miller of St. Louis, a graduate of Washington University Medical School, 1864, died at his home, Sept. 17, 1920, aged 78 years.



Soon after his graduation in medicine he was appointed assistant surgeon of the Confederate States Army and served in various hospitals, among them the Libby Prison Hospital, during the Civil War. Generous and warm-hearted, thoroughly in love with his profession and eager to see the science advance in its disease-conquering march, he contributed numerous articles to the medical press and throughout his active career he sought to improve the standards of medical practice and medical education. He was universally esteemed for his high ideals and generous acts and earned the love and affection of a wide circle of friends. He was active in medical society affairs for many years being a member of the St. Louis Medical Society, the State Association, and the Mississippi Valley Medical Association. In 1916 the St. Louis Medical Society elected him an honor member of that body.

HENRY BASCOM COLEMAN, M.D.  
1853-1920

Dr. Henry Bascom Coleman was born in Johnson County, Mo., July 27, 1853. His medical education was acquired in the Missouri Medical College, from which school he was graduated in 1878, after which he located at Columbus, Johnson County, the place of his birth and old home. Here he followed the work of his profession, which he did honestly and skilfully as all well know.

While living in Columbus he was honored by being sent to the Missouri Legislature in 1885. In 1893 he came to Kansas City and has since then devoted his time to doing all the good he could.

He became a member of this society in 1894 and until the time of his long sickness was active in all the good that obtained in it. He was a member of the Missouri State Medical Association and the American Medical Association. He was, for most of the time of his membership, a member of important committees, notably during the last eight years of the necrologic committee. His work was always thorough and well timed. Two of the necrologic reports especially were gems of English.

He was unobtrusive, never shirking a duty; he was plain spoken, but never gave offense; he was a good counsellor, but he never was officious; he was a good Christian gentleman.

The Jackson County Medical Society mourns its loss in his death.—*Bulletin, Jackson County Med. Socy.*

## MISCELLANY

### HONORABLY DISCHARGED, MEDICAL CORPS, U. S. ARMY AND NAVY

Brown, A. C. F., Kansas City.  
Cary, W. E., Kansas City.  
Long, L. H., Denver.  
Sippy, A. H., St. Louis.

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1920

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH  
HAVE PAID THE STATE ASSESSMENT FOR  
ALL THEIR MEMBERS)

Webster County Medical Society, Dec. 1, 1919.  
Madison County Medical Society, Dec. 2, 1919.  
Livingston County Medical Society, Dec. 31, 1919.  
Schuyler County Medical Society, Jan. 9, 1920.  
Benton County Medical Society, Jan. 23, 1920.  
Camden County Medical Society, Jan. 28, 1920.  
Linn County Medical Society, Feb. 24, 1920.  
Ralls County Medical Society, March 8, 1920.  
Ste. Genevieve County Medical Society, March 17, 1920.  
Atchison County Medical Society, March 26, 1920.  
Chariton County Medical Society, April 6, 1920.  
Cass County Medical Society, April 7, 1920.  
Clinton County Medical Society, June 15, 1920.  
Clay County Medical Society, Nov. 19, 1920.

### TWELFTH DISTRICT POSTGRADUATE MEETING

The Twelfth District Postgraduate Meeting convened in the Snapp Hotel in Excelsior Springs, Wednesday afternoon, Oct. 20, 1920, with thirty-three participating.

Extensive preparations were made for this, the second of the meetings in this district. An elaborate program was formulated and submitted, and the talent promptly furnished. Our disappointment cannot be measured when, on that morning, the sky was hidden by dense clouds and a copious rain occupied the entire forenoon. This made impossible the attendance of many physicians who intended to make the trip by automobile, and rendered possible only the attendance of the few who could come by direct railway service. Therefore, where we should have had at least 100 members present there were only about twenty-eight, exclusive of the lecturers.

Dr. Spence Redman, our faithful councilor, was among the first on the ground. I wish, in this connection, to say that Dr. E. J. Goodwin notified every member in the district by personal letter urging attendance, in addition to the regular notices by the six county secretaries, so that everything that could be done was officially attended to.

Every lecturer on the program responded cheerfully and gave those present ample return for their effort to brave the inclement weather. Dr. R. L. Russell of Jefferson City, Director of Venereal Diseases of the State Board of Health, exhibited his "Animated Diagrams" by means of the cinematograph, which consisted of two instructive reels of wonderful accuracy showing all stages of venereal disease, making an impression that will never be forgotten. Every male citizen of this country should witness this exhibition. The Orpheus Theater deserves the gratitude of our membership for courtesies in donating their place to our service free of charge.

Following is the program as rendered:

Dr. Edward L. Stewart of Kansas City presented the subject of staining and mounting the most common micro-organisms met with by the general practitioner. The Doctor is a pleasing and forceful lecturer and left with us much of lasting value.

Dr. J. C. Lyter of St. Louis gave us a most excellent lecture on "Postinfluenzal Conditions," devoting much time to differential diagnosis between these and tuberculosis. Strong points were: history of onset, and regional physical signs differentiated.

Dr. Caryl A. Potter of St. Joseph spoke on methods of regional anesthesia in minor surgery. This was an able discussion of the subject which the doctor

carried even into the domain of major operations. High points: Agents employed, their proper injection, tissues most susceptible, and advice in technic.

Dr. Ralph W. Holbrook of Kansas City gave by request a lecture on "Colitis." Outstanding features: Prevalence of the condition, its causes, errors in diagnosis, errors in medication, and the general neglect of a source of much human suffering.

Dr. Charles C. Dennie of Kansas City closed the session with "Treatment of Tertiary Lues," with special reference to the Ehrlich formulas. Dr. Dennie does not mince words; he talks in terms of finality. His conclusions are based on profound investigation mixed with sound judgment. He withstood a machine-gun fire of questions without a scratch.

Discussion by Drs. J. H. Rothwell, Liberty; Caryl A. Potter, St. Joseph; E. L. Stewart, Kansas City; R. W. Holbrook, Kansas City.

Election of officers resulted in the selection of Dr. J. H. Rothwell of Liberty, chairman; J. J. Gaines of Excelsior Springs, secretary; program committee: Drs. E. H. Miller, Liberty; F. H. Matthews, Liberty, and J. J. Gaines, Excelsior Springs. Next meeting, third Wednesday in June, 1921, at the General Hospital in Kansas City.

J. J. GAINES, M.D., Secretary.

#### BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held Sept. 1, 1920, at the Dr. Woodson Sanatorium. About ninety members were present as dinner guests of Dr. C. R. Woodson. Rabbi Louis Bernstein made the address of the evening.

The meeting was made a social session and Dr. Woodson again tendered the members a dinner one year hence and invited the society to hold its first meeting after the 1921 vacation interim at that time.

##### Meeting of Sept. 15, 1920

The regular meeting was held at the Commerce Club rooms, September 15. Dr. C. R. Woodson was chosen president pro tem, the other officers being absent.

A motion to consider the business carried over from the vacation interim prevailed.

Dr. L. H. Fuson, Seventh and Edmond Streets, was duly elected a member of this society.

The application for membership of Dr. O. A. Bandel, 309 P. and S. Building, was read and referred to the censors.

Dr. C. R. Woodson presented the subject, "Recognition of the Early Manifestations of Diseases of the Central Nervous System: Part Two." Discussion by Drs. Leonard, Seibach, Lau and Willman.

Dr. P. I. Leonard read a paper, "Hospital Standardization," that was discussed by Dr. Elam.

Attendance 31.

OLIVER C. GEBHART, M.D., Secretary.

#### CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in Harrisonville, Sept. 9, 1920, in the Court House, at 2 p. m.

The following members and visitors were present: Drs. T. W. Adair, W. F. Chaffin, H. S. Crawford, F. E. Dargatz, D. S. Long, M. P. Overholser, R. D. Ramey, J. U. Scott, B. B. Tout and J. S. Triplett; visitors, Drs. Jabez N. Jackson, H. F. White and J. G. Montgomery, and Miss Grace Rice, a nurse from the Christian Hospital, all of Kansas City; Miss Anna K. Westman, Public Health Nurse of Harrisonville.

The following program was carried out:

"Lumbago," by Dr. R. D. Ramey, Garden City. The subject was written up in a very excellent manner and several of the doctors participated in a very interesting discussion of it.

"Some Points on Diagnosis of Appendicitis and Simulating Conditions," was the subject of a splendid address by Dr. Jabez N. Jackson. The address was forceful and full of excellent facts on the subject. He spoke in simple language, and made plain to those who were fortunate enough to hear him, many interesting features in the diagnosis of appendicitis. The address was well worth hearing by every member of the society. Drs. Dargatz, Overholser, Montgomery, Crawford and Jackson took part in the discussion.

"Our County Physician's Graft," by Dr. W. F. Chaffin, Raymore, was a discussion of the indifference and laxity of the present methods of quarantine and disinfection of premises in contagious diseases. He related many instances where the county health officer was called to quarantine homes where contagious diseases were found and did not get there for three or four days after being called. In a general discussion of the subject by all the doctors present it was the unanimous opinion that the present methods of quarantine and disinfection were ineffectual and a useless expense to the taxpayers.

Miss Anna K. Westman, who has recently been located in this territory by the local Red Cross Society, was introduced and spoke briefly on the plans of her work.

Dr. R. D. Ramey presented an interesting case to the society which was examined with much interest by all the doctors present.

This was one of the best attended and most interesting meetings of the Cass County Medical Society since the close of the World War, and if the present interest can be maintained our society will certainly prosper. This county is well organized but there are several physicians who are eligible to membership and they should be in the society. It is of untold benefit to them as well as their patients. We hope to see these men take advantage of the benefits of our organization and become members before January, 1921.

H. S. CRAWFORD, M.D., Secretary.

#### HENRY COUNTY MEDICAL SOCIETY

The Henry County Medical Society met in the high school at Clinton, Wednesday, September 15, at 2:45 p. m. The meeting was called to order by Dr. Bradley, the president, and the following were present: Drs. J. H. Walton, R. J. Jennings, J. G. Beaty, B. B. Barr, J. R. Hampton, S. A. Poague, S. W. Woltzen, E. C. Peelor, N. I. Stebbins, R. D. Haire, I. J. Russell, J. W. Galbreath, R. L. Shadburn, M. H. Keeler, L. L. Smith, F. M. Douglass, J. T. Hornback, Nevada; W. Cline and R. J. Smith, Appleton City; W. A. Hibbler, Green Ridge, and our counselor, Dr. Guy Titsworth, Sedalia. Dr. William K. Trimble and Dr. J. Q. Chambers of Kansas City and Dr. Bransford Lewis of St. Louis were invited guests. The minutes of previous meetings were read and approved.

Dr. Trimble gave a very instructive lecture on syphilis and its treatment which was entertaining and attentively received. When Dr. Lewis arrived the room was darkened for lantern work and his theme, "Phases of Genito-Urinary Surgery," was discussed and illustrated in an understanding manner and approved by all present. Dr. J. Q. Chambers then spoke on cardiovascular sclerosis. It was an extra good talk to listen to. The discussion of these subjects and the questions asked the lecturers provided that all had taken a deep interest in every word spoken, and had received instruction that was equal to any postgraduate meeting that could be held.

Dr. Bradley in proposing that these lecturers be placed on our honorary roll of members said he believed this to have been one of the best, if not the very best, meeting ever held by this society.

F. M. DOUGLASS, M.D., Secretary.



### HOLT COUNTY MEDICAL SOCIETY

The Holt County Medical Society met at Craig, Thursday, October 7. The president, Dr. J. L. Minton, being absent, Dr. Ottman, vice president, took the chair.

After transacting the regular routine business of the society, Dr. Wood exhibited several radiographs of cases he had recently treated to illustrate points he brought out in his talk on "The Usefulness of the Roentgen Ray in Bringing to Light the True Nature of Injuries (Fractures) and Many Other Conditions, Which Could Not Be Discovered by Other Means."

Dr. Chandler followed and spoke of "The Danger Which May Follow the Misinterpretation of the Skiagraph by an Inexpert Radiographer."

Dr. Bullock reported a case of fracture of the skull, describing the treatment to be followed after closing the scalp wound.

Dr. Osborn of Corning spoke on fracture of the clavicle, delving into the history of "ye ancient times" to more fully exemplify the retentive measures necessary to be made use of in holding the fragments in position.

All present took part in the discussion which followed, and were well repaid by their visit.

The next meeting of the society will take place at Forest City, the first Thursday in January.

J. F. CHANDLER, M.D., Secretary.

### VERNON COUNTY MEDICAL SOCIETY

A session of the Vernon County Medical Society was held October 7, in Nevada. As usual the morning was employed in the examination of clinics at the Vernon Sanitarium through the courtesy of Dr. Stebbins. These clinics were very interesting as well as profitable, were attended by many members and were in charge of Drs. J. Edward Burns and W. A. Meyers of Kansas City. In addition to these two gentlemen the following physicians were present: Drs. Callaway, Yater, Craig, Robinson, Hornback, Stebbins, McLe-more, Dulin, Willson, Bohanon, Lancaster and Dawson of Nevada. Also Drs. Boone and Popplewell of Sheldon, Combs of Bronaugh, Walker of Harwood, Cline and Smith of Appleton City, Keithly of Milo, Schaff of Moundville and Osborne a visitor. The afternoon meeting was held in the Court House, and after the president called it to order and some preliminary business received attention, Dr. Burns lectured on "Prostatectomy," and described the many steps in this important operation. He was followed by Dr. Meyers with reports from many cases of his extensive practice. Both of these lectures were illustrated by lantern slides and were well discussed and many questions asked. Drs. Clark, Homer, Hall and William Gustav Frieday made application for membership. Drs. Burns and Meyers were elected honorary members of the society, and were further complimented by a vote of appreciation of their lectures and for their attendance. The society greatly enjoyed many Maiden Blush apples provided by the secretary. The society adjourned until its next regular meeting subject to the call of the secretary.

E. A. DULIN, M.D., Secretary pro tem.

### WAYNE COUNTY MEDICAL SOCIETY

The Wayne County Medical Society met in regular session at Piedmont with the president, Dr. Toney, in the chair. The following members were present: L. E. Toney, J. P. Sebastian, R. J. Owens. Visitors: J. E. Gelmer and C. H. Jones. The minutes of the previous meeting were read and approved.

The application for membership by C. H. Jones was acted on and he was duly elected. The secretary was instructed to send the following questionnaire to candidates for representative and state senator:

### QUESTIONNAIRE TO CANDIDATE:

The Wayne County Medical Society believes that it is a part of the physician's duty as a guardian of the public health to aid in the election of state executives and legislators who are informed regarding health matters and whose interest in such affairs indicate that questions of such paramount importance may be safely intrusted to them. To aid us and the public to a correct judgment of your position on public health matters, we respectfully request a careful reading of the following and a statement of your position on the four points to which we call your attention, viz.:

1. The art of medicine arose from practices based on religious beliefs and theories. So originating, many theoretical schools and systems of practice were popularized. In the last forty years, with the development of scientific discoveries, a growing knowledge of biologic laws, the discovery of the causes of disease and new remedies therefor, medicine has assumed the dignity of a science. This is the medicine now recognized by all scientific men, by the Army, the Navy, and all enlightened governments; it embraces all scientific knowledge of the human body and all the known means for the prevention as well as the relief of disease and sickness. The growth of this knowledge necessitates a high order of medical education, for without that sort of education a physician is now more of a menace than a help in preventing disease or relieving the sick. This condition of affairs has been recognized by the legislature in the form of the existing Medical Practice Act, which recognizes no "school" but requires the same education of all applicants who would practice the healing art on the human body or any part thereof, and in addition requires all applicants to pass examinations on certain fundamental branches of medicine without a knowledge of which it is impossible to offer a satisfactory diagnosis and treatment of any condition. Such standards to safeguard the health of the people we are concerned in maintaining. We therefore request you to reply to the following question:

If elected to office will you favor legislation that will maintain and strengthen the educational standards of the present Medical Practice Act?

*Answer:*

1. Since the time when medicine was placed on a scientific basis there have arisen numerous groups of would-be medical practitioners known as "sects," or "schools," holding some peculiar theoretical views regarding the cause of disease and methods of cure, wholly fanciful in conception and utterly devoid of scientific basis. The adherents of such schools constantly seek admission to the practice of medicine by appeals to the legislature and always request exemption from the standard educational requirements exacted of physicians under the Medical Practice Act. The desire to enter the practice of medicine without the expense in time and money to obtain the standard medical education is the only purpose of these repeated requests for legislative recognition. These sects seek to invade the field of medicine without an adequate education by selecting some one organ or particular part of the body, and claim that a knowledge of scientific medicine is not essential in their limited field. But every intelligent and unbiased person knows that the body is a unit; that each part in some way affects every other part; and that a knowledge of the whole is essential for safe diagnosis and treatment no matter what part is primarily involved. There is no half-way station. Believing that the maintenance of these basic principles is vital to the public welfare, we ask you to reply to the following question:

*Question:* If elected to office will you oppose bills to legalize systems or "schools" of medical practice, such as chiropractics, vitopaths, napropaths, magnetic healers, optometrists, and the like, that do not comply

with the educational standards of the present Medical Practice Act?

*Answer:*

3. The prevention of disease is one of the brilliant achievements of scientific medicine whose beneficences have merely been indicated by the triumphs already gained. What we have suffered by lack of this knowledge in the past was tragically shown in the tremendous number of men rejected for military service during the World War on account of physical defects due to preventable diseases. Syphilis and gonorrhea, many affections of the heart, lungs, and kidneys, and numerous defects of the eyes and ears that could have been prevented, were the principal causes for these rejections. If our health laws gave the State Board of Health adequate powers, supported by sound financing, for controlling and preventing epidemics and other communicable diseases, and for directing the inspection of school children to discover remediable defects, the next generation would gain immeasurable benefits in physical and mental development. Recognizing the importance of controlling and preventing disease through organized effort by the State Board of Health, we ask you the following question:

*Question:* If elected to office will you favor bills to strengthen the powers and enlarge the scope of activity of the State Board of Health by appropriate legislation and adequate appropriations?

*Answer:*

4. Since we are held responsible for the protection of the health of the people of Wayne County we shall expect our representatives in the legislature to consult with us concerning the action they should take on bills affecting the health of the community and the practice of medicine. Therefore we ask you to reply to the following question:

*Question:* Will you protect our interests as citizens and physicians and consult with us on the passage of bills affecting the health of the community and the practice of medicine?

*Answer:*

Signature \_\_\_\_\_

Various topics were discussed in an informal way with much interest.

There being no further business the meeting adjourned to meet at Greenville, October 2.

R. J. OWENS, M.D., Secretary.

## BOOK REVIEWS

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles. Edited by H. R. M. Landis, M.D., Philadelphia, U.S.A. Volume II. Thirtieth Series, 1920. Philadelphia and London: J. B. Lippincott Company.

A new department in "International Clinics" on "Industrial Surgery" under caption of "Industrial Surgical Clinics," brings directly to our attention the great progress made in industrial and social medicine. In addition it demonstrates the recognition of the great transition in medical and surgical practice which demands publicity through medical literature.

The great object and purpose of the industrial surgeon is to assist in establishing conditions in the industrial world tending to prevent infection and injury, and at the earliest possible moment following any accidental infection or injury to return the patient in question, with least limitation possible, to his fullest and most efficient earning capacity.

In the preface Magnuson and Coulter state that the objects of this department are: 1. To call attention to the diagnosis and treatment of various sur-

gical conditions which occur in industry as a result of accidents. 2. To bring out the methods of treatment which minimize the results of the injury and lessen the loss of time to the individual and the industry. 3. To call attention to some of the fallacies of past surgical teachings as related to the first two points. 4. The effect of intercurrent diseases on injuries and the prolongation of disabilities. 5. Compensation acts provide that if a man has a disability when he is originally employed, and through injury this disability is made worse and the individual incapacitated, in spite of the fact that the condition existed previous to the accident the employer must pay for the total disability. 6. To detail the methods of diagnosis that have given us the best results in the detection of malingerers. 7. Especial attention given to corrective surgery. 8. To illustrate with roentgen-ray plates and other views not ordinarily seen in textbooks. 9. To describe the reconstructive methods used to continue and complete the medical-surgical treatment of injuries to restore the disabled individual to the greatest future use. 10. Medico-legal questions affecting surgical injuries.

To make the department as practical as possible, both for the industrial and the general or special surgeon, illustrative cases, indicating the special consideration of a directing hand, are given in each quarterly article.

The department is a most important one and will prove a stimulus to the very best of medical practice along both preventive and curative lines. S. P. C.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1920, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

ICHTHYNAT.—An aqueous solution, the important medicinal constituents of which are ammonium compounds containing sulphur in the form of sulphonates, sulphones and sulphides. These characteristic forms of sulphur result from the sulphonation of the tarlike distillate obtained from certain bituminous shales. For the actions and uses of ichthynat see the general article on Sulphoichthyolate Preparations and Substitutes, New and Nonofficial Remedies, 1920, page 318. The Heyden Chemical Works, New York City (*Jour. A. M. A.*, Oct. 2, 1920, page 939).

PROGANOL.—A compound of silver and albumose, containing not less than 8.3 per cent. of silver in organic combination. For the actions and uses of proganol, see general article on silver preparations, New and Nonofficial Remedies, 1920, page 306. From 0.25 to 1 per cent. solutions are used in acute gonorrhea, and 5 to 10 per cent. instillations in chronic cases. In cystitis and urethritis from 1:1,000 to 1:2,000 solutions are used as irrigations. Used also in forms of bougies and tampons (5 to 10 per cent.).

TWENTY PER CENT. AROMATIZED SUSPENSION MADE FROM BENZYL BENZOATE VAN DYK AND CO.—A mixture, each 100 Cc. containing benzyl benzoate for therapeutic use (Van Dyk and Co.), 20.32 Gm.; acacia, 8.0 Gm.; olive oil, 5.00 Gm.; sugar, 12.00 Gm.; flavors and water, to make 100 Cc. For actions and uses of benzyl benzoate, see New and Nonofficial Remedies, 1920, page 49. United Synthetic Chemical Corporation, New York (*Jour. A. M. A.*, Oct. 16, 1920, page 1069).



**ACRIFLAVINE-ABBOTT.**—A brand of acriflavine (see New and Nonofficial Remedies, 1920, page 20) complying with the N. N. R. standards. The Abbott Laboratories, Chicago.

**PROFLAVINE-ABBOTT.**—A brand of proflavine (see New and Nonofficial Remedies, 1920, page 21) complying with the N. N. R. standards. The Abbott Laboratories, Chicago.

**BETANAPHTHOL BENZOATE-SEYDEL.**—A brand of betanaphthyl benzoate (see New and Nonofficial Remedies, 1920, page 189) complying with the N. N. R. standards. Seydel Manufacturing Co., Jersey City, N. J.

**BENZYL ALCOHOL-SEYDEL.**—A brand of benzyl alcohol (see New and Nonofficial Remedies, 1920, page 27) complying with the N. N. R. standards. Seydel Manufacturing Co., Jersey City, N. J. (*Jour. A. M. A.*, Oct. 30, 1920, page 1205).

### PROPAGANDA FOR REFORM

**MORE MISBRANDED VENEREAL NOSTRUMS.**—The following preparations have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, on the ground that the therapeutic claims made for them were false and fraudulent: Injection Malydor (The Williams Mfg. Co., Cleveland, Ohio), essentially a dilute watery solution of boric acid, phenol, a zinc salt, glycerin, acetanilid and unidentified plant material. G Zit (The Stearns Hollinshead Co., Inc., Portland, Oregon), bougies consisting essentially of cacao butter and a silver compound. G Zit Antiseptics (The Stearns Hollinshead Co., Portland, Oregon), composed essentially of oils of copaiba and cubebs, and a compound of sulphur. Hinkle Capsules (Hinkle Capsule Co., Mayfield, Ky.), consisting essentially of powdered cubebs, copaiba and cannabis indica. Tisit-Pearls (S. Pfeiffer Mfg. Co., East St. Louis, Ill.), consisting essentially of a mixture of oil of sandalwood, balsam of copaiba, oil of cinnamon and a fixed oil. Tisit (S. Pfeiffer Mfg. Co., East St. Louis, Ill.), a watery solution of zinc sulphate, thymol, alum and glycerin. Black-Caps (Safety Remedy Co., Canton, Ohio), consisting essentially of copaiba, cubebs and saw palmetto. Hexagon (Montebello Laboratories, Kansas City), an injection consisting essentially of a watery solution of zinc sulphocarbonate, boroglyceride and bismuth subnitrate and capsules containing hexamethylenamin. Hyatt's A. B. Balsam (C. N. Crittendon Co., New York City), consisting essentially of potassium iodid, alum, Epsom salt, plant extractives and unidentified alkaloids, sugar, glycerin and alcohol. DuQuoin's Compound Santal Pearls (Wm. R. Warner and Co., Inc., New York City), consisting essentially of a mixture of santal oil and copaiba (*Jour. A. M. A.*, Oct. 2, 1920, page 954).

**MORE MISBRANDED VENEREAL NOSTRUMS.**—The following preparations have been the subject of prosecution by the federal authorities under the Food and Drugs Act, chiefly because the therapeutic claims made for them were false and fraudulent. Injection Zip (The Baker-Levy Chemical Co.), consisting essentially of acetates and sulphates of zinc and lead, opium, berberin, plant extractives, alcohol and water. Three Days Cure ("3 Days" Cure Co.), consisting essentially of zinc sulphate, boric acid and water. Redsules (H. Planten and Son), consisting essentially of oil of santal, copaiba and methyl salicylate. Blakes Capsules (Henry K. Wampole and Co.), consisting essentially of a tablet of salol suspended in a mixture of volatile oils, oleoresins and plant extractives, including copaiba and cubebs. Compound Extract of Cubebs with Copaiba (The Tarrant Co.), consisting essentially of cubebs, copaiba and magnesium oxid. Santal

Midy Capsules (E. Fougere and C.), containing essentially oil of santal (*Jour. A. M. A.*, Oct. 9, 1920, page 1016).

**THE BETHLEHEM LABORATORIES EXPLAIN.**—The president of the General Laboratories, who is also vice president of the Bethlehem Laboratories, explains that the Bethlehem Laboratories is the sales and distribution organization for hyclorite, which is manufactured by the General Laboratories, and that the offer from the Bethlehem Laboratories to sell to physicians shares in the company was the unauthorized act of an authorized agent. The General Laboratories and the Bethlehem Laboratories recognize the impropriety of soliciting physicians to purchase stock in their concern (*Jour. A. M. A.*, Oct. 9, 1920, page 1016).

**SUCCUS CINERARIA MARITIMA.**—The medical profession is at present receiving through the mail circulars extolling this nostrum for its alleged virtue in "absorbing" various forms of cataract. In February, 1917, the Bureau of Chemistry of the U. S. Department of Agriculture issued a Notice of Judgment which showed that the government authorities had prosecuted the firm which markets the preparation—The Walker Pharmacal Company—because claims were made on the trade package to the effect that this nostrum was a remedy for cataract and other opacities of the eye. The authorities charged that these claims were false and fraudulent. To this charge the company pleaded guilty, but these claims are still being made through other avenues to the medical profession (*Jour. A. M. A.*, Oct. 9, 1920, page 1007).

**THE USE OF ARSPHENAMINE AND RELATED COMPOUNDS.**—Many therapeutic perplexities remain after nearly a decade of trial of the type of compound which Ehrlich introduced. It is well for the practitioner to realize this, especially when expert workers still make an appeal for conservative interpretation. Arspenamine has apparently made it possible or even probable, but only to the inexperienced has the cure of syphilis been made absolute and inevitable. Even the composition of arspenamine and neo-arsphenamine is not fully known, and the control of the products by the government is important. It should be borne in mind also that neo-arsphenamine behaves differently in the animal organism from arspenamine, and should not be regarded simply as arspenamine in a convenient form for administration. The various brands of arspenamine and neo-arsphenamine made in the United States compare favorably as to toxicity with those made abroad (*Jour. A. M. A.*, Oct. 9, 1920, page 1005).

**BRAN-O-LAX TABLETS.**—The public is urged to purchase these "Laxative Wheat-Bran Tablets for constipation and indigestion instead of those severe and harmful drugs." The essential claims, either inferred or expressed, are to the effect that Bran-O-Lax Tablets are wheat bran in condensed form and that they are free from "harmful drugs." It is also claimed that "Bran-O-Lax contains one heaping tablespoonful of plain nutritious wheat bran condensed into tablet form." The A. M. A. Chemical Laboratory reports that Bran-O-Lax Tablets contain wheat bran, reducing sugar (probably glucose) in large amounts, a gummy substance, probably acacia, and about one grain of phenolphthalein per tablet. Whereas a heaping tablespoonful of wheat bran was found to weigh about 166 grains, the total weight of a Bran-O-Lax Tablet was only about 35½ grains (*Jour. A. M. A.*, Oct. 16, 1920, page 1083).

**TOXICITY OF ARSPHENAMINE.**—Roth has determined that if an alkalinized solution of arspenamine or a solution of neo-arsphenamine is shaken in the presence of air for one minute, the toxicity is increased. He

points out that arsphenamine preparations which are soluble with difficulty are likely to be shaken to aid in the solution of the drug with the risk that chemical reaction may occur (*Jour. A. M. A.*, Oct. 16, 1920, page 1072).

**CHAULMOOGRA OIL IN LEPROSY.**—Continued trials made at the leprosy investigation station of the U. S. Public Health Service and the Kalihi Hospital at Hawaii seem to justify more than ever the statement that chaulmoogra oil contains one or more agents that exert a marked therapeutic action in many cases of leprosy. The intramuscular injection of the soluble ethyl esters of the fatty acids from chaulmoogra oil usually leads to a rapid improvement in the clinical symptoms of leprosy. The ethyl esters of iodine addition compounds of the unsaturated fatty acids in chaulmoogra oil have also been used. There is no experimental proof that this addition of iodine causes any increase in the effectiveness of the material used (*Jour. A. M. A.*, Oct. 16, 1920, page 1071).

**FAKE ORANGE BEVERAGES.**—The Orange and other citrus fruits possess value other than that which can be measured by flavor or fuel value. They are relied on as antiscorbutic by a large number of persons in the preparation of food mixtures which for some reason are deficient in this protective element. Oranges merit additional favor because they are relatively rich in the water-soluble vitamin B, sometimes designated antineuritic vitamin, which promotes well-being in as yet an undetermined way. In view of these facts, the chemists of the U. S. Public Health Service have done well in their timely warning against the "fake" orange beverages that have come to their attention. They report that in most cases the fraudulent products consisted of carbonated water, flavored with a little oil from the peel of the orange and artificially colored to imitate orange juice (*Jour. A. M. A.*, Oct. 16, 1920, page 1073).

**VACCINES IN TOXIC CONDITIONS.**—Under this title an article purporting to be a scientific contribution appears in the original department of the *Illinois Medical Journal*. The apparent purpose of the article is to overcome any hesitancy on the part of practitioners to use vaccines in toxic infectious conditions for fear that they might thereby cause harm. The theory propounded is contrary to those who have studied the subject. The man who writes the article, G. H. Sherman, is in the business of making and selling vaccines, though this is not made evident in the article (*Jour. A. M. A.*, Oct. 23, 1920, page 1140).

**MORE MISBRANDED PRODUCTS.**—The following products have been the subject of prosecution by the federal authorities: Salubrin (Salubrin Laboratories, Grand Crossing, Chicago) was held to be misbranded because the therapeutic claims made for it were false and fraudulent. Dolomol-Calomel and Dolomol Iodoform (Pulvola Chemical Co., Jersey City, N. J.) were held to be adulterated and misbranded because they did not have the composition claimed. Influenza Special (Senoret) (Senoret Chemical Co., St. Louis) was misbranded because the therapeutic claims made for it were false and fraudulent. Gray's Ointment (Dr. W. F. Gray and Co., Nashville, Tenn.) was misbranded because the therapeutic claims were false and fraudulent. Vegetable Blood Purifier (Gibson-Howell Co., Jersey City, N. J.) was held misbranded on the ground that the therapeutic claims were false and fraudulent. Renovine (Van Vleet-Mansfield Drug Co., Memphis, Tenn.) was held to be misbranded because the therapeutic claims were false and fraudulent. Cin-Ko-Na and Iron (De Lacy Chemical Co., St. Louis) was declared misbranded because the curative claims were false and fraudulent. Craig Healing Spring Mineral Water (Craig Healing Springs Hotel,

New Castle, Va.) was held to be misbranded because the therapeutic claims were false and fraudulent. Laxa-Cura Water Co.) was held to be adulterated and misbranded because it consisted in part of a filthy and decomposed putrid animal and vegetable substance, and because the alleged analysis was incorrect and because the curative claims were false. Reuter's Little Pills for the Liver (Barclay and Co., New York) were held misbranded because the curative claims were false and fraudulent (*Jour. A. M. A.*, Oct. 23, 1920, page 1150).

**TANNIN COMPOUNDS USED AS INTESTINAL ASTRINGENTS.**—On account of the irritant action of tannic acid on the stomach, a number of tannic acid compounds have been introduced which are assumed to pass the stomach practically unchanged but are broken up in the intestines with liberation of the tannic acid. Working in the A. M. A. Chemical Laboratory, P. N. Leech has made a study of the tannin compounds described in New and Nonofficial Remedies, and also of some recently introduced American products, to determine whether they are largely unchanged by action of gastric juice, and if so, whether they are capable of decomposition by the intestinal juice. For this purpose he determined the solubility of each compound in water and hydrochloric acid solution, acid and pepsin solution, and sodium bicarbonate and pancreatic extract solution. Only one type of tannic acid compound studied completely resists the action of the gastric juice and is broken down in the intestine according to theory, i. e., the diacetyl tannin acid compound acetannin. Tannigen is fairly satisfactory, but the market supply is not of reliable composition. Protan and tannoform are both readily soluble in sodium bicarbonate mediums, but they are probably not broken up to a great extent in the intestine. Of the tannin albuminates, Albutannin-Calco and Albutannin-M.C.W. are not nearly so resistant to the acid-pepsin digestion as tannalbin and tannin albuminate exsiccated. Both tannalbin and tannin albuminate exsiccated (the latter now sold as Albutannin-Merck) are not particularly resistant to the acid-pepsin medium, but they do liberate free tannic acid in the alkaline-pancreatic medium (*Jour. A. M. A.*, Oct. 23, 1920, page 1120).

**CAPSULES FOLIA-DIGITALIS-UPSHER SMITH AND TINCTURE OF DIGITALIS-UPSHER SMITH.**—The Council on Pharmacy and Chemistry reports that these preparations, advertised and sold by Upsher Smith, St. Paul, Minn., were considered and found to have the status of official articles. For this reason they were not admitted for inclusion in New and Nonofficial Remedies (*Jour. A. M. A.*, Oct. 30, 1920, page 1205).

**SUPSALVS NOT ADMITTED TO N. N. R.**—The Council on Pharmacy and Chemistry reports that Supsalvs are advertised by the Anglo-French Drug Co. as "stable" suppositories of '606' (of French manufacture) with the claim that by rectal administration of these suppositories the effects of arsphenamine may be obtained. The Council found Supsalvs inadmissible to New and Nonofficial Remedies, first, because the quality of the medicament contained in the suppositories has not been established and, second, because the claimed efficacy of this preparation as a means of securing the effects of arsphenamine lacks substantiating proof. In its report the Council quotes from L. W. Harrison on "The Treatment of Syphilis," from Schamberg and Hirschler on "A Safe and Efficient Intensive Method of Treating Syphilis," and from the report of the special committee on the manufacture, biological history and clinical administration of salvarsan and other substances of The British National Insurance Medical Health Research Committee, to show that the general opinion of experienced workers is to the effect that the rectal method of administering arsphenamine is ineffective (*Jour. A. M. A.*, Oct. 30, 1920, page 1219).



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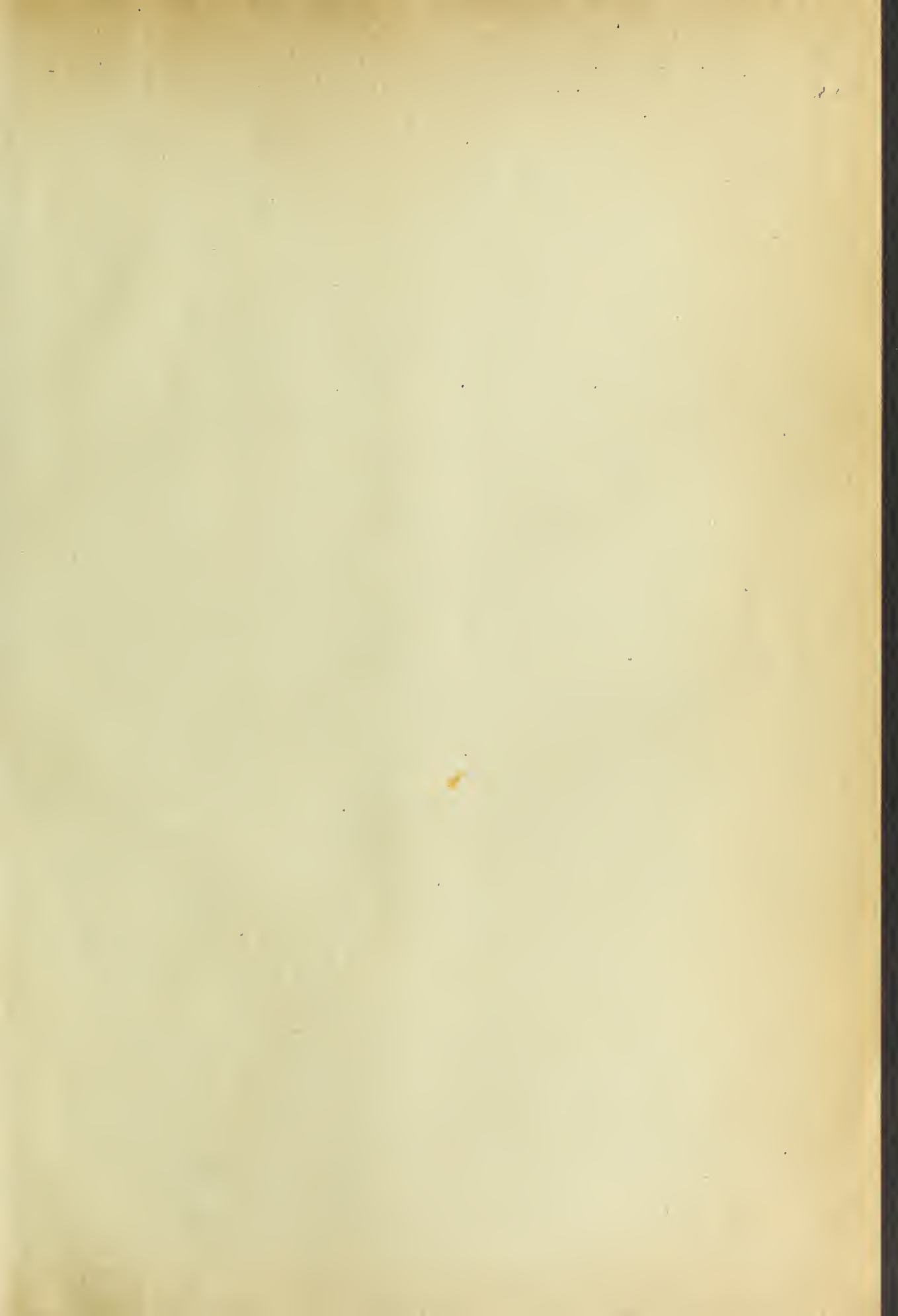
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